

320040

JPRS 81854

27 September 1982

USSR Report

MILITARY AFFAIRS

No. 1709

19981130 059

FBIS

FOREIGN BROADCAST INFORMATION SERVICE

Reproduced From
Best Available Copy

DTIC QUALITY INSPECTED 3

10
61
A04

NOTE

JPRS publications contain information primarily from foreign newspapers, periodicals and books, but also from news agency transmissions and broadcasts. Materials from foreign-language sources are translated; those from English-language sources are transcribed or reprinted, with the original phrasing and other characteristics retained.

Headlines, editorial reports, and material enclosed in brackets [] are supplied by JPRS. Processing indicators such as [Text] or [Excerpt] in the first line of each item, or following the last line of a brief, indicate how the original information was processed. Where no processing indicator is given, the information was summarized or extracted.

Unfamiliar names rendered phonetically or transliterated are enclosed in parentheses. Words or names preceded by a question mark and enclosed in parentheses were not clear in the original but have been supplied as appropriate in context. Other unattributed parenthetical notes within the body of an item originate with the source. Times within items are as given by source.

The contents of this publication in no way represent the policies, views or attitudes of the U.S. Government.

PROCUREMENT OF PUBLICATIONS

JPRS publications may be ordered from the National Technical Information Service (NTIS), Springfield, Virginia 22161. In ordering, it is recommended that the JPRS number, title, date and author, if applicable, of publication be cited.

Current JPRS publications are announced in Government Reports Announcements issued semimonthly by the NTIS, and are listed in the Monthly Catalog of U.S. Government Publications issued by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Correspondence pertaining to matters other than procurement may be addressed to Joint Publications Research Service, 1000 North Glebe Road, Arlington, Virginia 22201.

Soviet books and journal articles displaying a copyright notice are reproduced and sold by NTIS with permission of the copyright agency of the Soviet Union. Permission for further reproduction must be obtained from copyright owner.

27 September 1982

USSR REPORT MILITARY AFFAIRS

No. 1709

CONTENTS

MILITARY-POLITICAL ISSUES

- Leninist Concept of Just and Unjust Wars Discussed
(V. Molchanov; SOVIET MILITARY REVIEW, Aug 82)..... 1

MILITARY SCIENCE, THEORY, STRATEGY

- Modern Defensive Tactics Discussed
(L. Korzun; SOVIET MILITARY REVIEW, Aug 82)..... 4
- Wartime Operations: The Use of Maneuver in Defense Discussed
(A. Popov; SOVIET MILITARY REVIEW, Aug 82)..... 9

ARMED FORCES

- Ethnic Relations in Armed Services Discussed
(A. Skrylnik; SOVIET MILITARY REVIEW, Aug 82)..... 12
- Legal Authority of Commander's Orders Described
(N. Gusev; SOVIET MILITARY REVIEW, Aug 82)..... 15
- Wartime Operations: The Defense of the Caucasus Discussed
(L. Kozlov; SOVIET MILITARY REVIEW, Aug 82)..... 18

AIR FORCES

- USSR Air Force Cmc, Chief Mar P. Kutakhov Article on
Aviation Day
(P. Kutakhov; SOVIET MILITARY REVIEW, Aug 82)..... 21
- Ground Training for Pilots Described, Part 2: Flight
Preparation
(Yu. Leonov; SOVIET MILITARY REVIEW, Aug 82)..... 25

Flight Safety: Helicopters and Obstacles (Yu. Malakhov; SOVIET MILITARY REVIEW, Aug 82).....	28
GROUND FORCES	
BMD-1 Airborne Assault Vehicle Described (A. Beskurnikov; SOVIET MILITARY REVIEW, Aug 82).....	30
AIR DEFENSE FORCES	
Articles on Air Defense Forces Day (Various sources, various dates).....	34
Defending the Skies, by A. Kulakov Transcaucasian Air Defense Chief Interview, V. P. Sinitsyn Interview Air Defense Forces Deputy Interview, A. G. Smirnov Interview Air Defense Political Chief on Goals, by V. Mikhaylov Radar Troop Training, by A. Grigoryan Historical Background of Air Defense Forces Air Defense Aviation Commander Interview; N. I. Moskvitelev Interivew	
LOGISTICAL SERVICES AND SPECIAL TROOPS	
Engineer Support for Motorized Rifle Battalion Described (V. Sobolev; SOVIET MILITARY REVIEW, Aug 82).....	50
PERCEPTIONS, VIEWS, COMMENTS	
Commentary on U.S. "Strategy" (M. Petrov; SOVIET MILITARY REVIEW, Aug 82).....	53

MILITARY-POLITICAL ISSUES

LENINIST CONCEPT OF JUST AND UNJUST WARS DISCUSSED

Moscow SOVIET MILITARY REVIEW in English No 8, Aug 82 pp 36-38

[Article by Col V. Molchanov: "Just and Unjust Wars"]

[Text]

Historical experience teaches that war is a complex socio-political phenomenon. Wars are distinguished according to various factors: socio-historical (connection with epoch, social character), the scale (range of aims pursued by belligerents, number of participants, spacial scope, duration), military-technical (character of military equipment used, methods of combat operations). All of them are important and must be taken into consideration, because there is no such thing as war in general, only and always a concrete, definite war in which all the above-mentioned elements are closely interwoven. At the same time the most important among these factors was and remains the socio-political for it is this criterion that makes it possible to define correctly and in good time for what purpose a war is waged, the continuation of policy of which classes it is and what socio-political consequences the victory of this or that class will entail. Only on this basis can classes and parties work out their attitude to wars. That is why it is required that, as V. I. Lenin pointed out, "in each individual case we define the political content of war."

It is a known fact that war is a continuation of policy by other, violent means. Such is the standpoint of Marxism-Leninism. Indeed, the ruling classes implement their policy through a system of economic, political and ideological means. But when these means are insufficient to achieve the set goals the ruling classes resort to armed violence.

This fact is wholly confirmed by the politics of contemporary imperialism, above all of the USA,

as regards developing countries, especially those which have embarked on the road of socialist development. It uses against them political pressure, economic sanctions, ideological subversion and the like. If these means do not yield the expected results, the imperialists resort to the "stick" — armed forces and mercenaries. This system of violence has been experienced by the peoples of the colonial and dependent countries of Asia, Africa and Latin America.

A policy may be progressive or reactionary, it may contribute to the progress of a society and the whole of mankind or may become a hindrance to it, depending on which class interests it expresses. By their character wars may also be classified as just, progressive or reactionary, predatory. The notion of justice or injustice of wars is a class notion and may include political, legal, moral, ethical and in the case of believing peoples religious aspects. Appraisal of a concrete war is made by the ruling classes, who use powerful mass information media to justify it. At the same time the working people make their own appraisal of the war. In antagonistic societies these appraisals are, as a rule, diametrically opposite. That is why the forces that have been or are preparing wars do all they can to camouflage their true aims, to impose their own understanding of the character of wars using such terms as humanism and justice as a cover. For example, the bellicose imperialist circles of the USA explain their preparations for a new world war by the necessity to protect "American vital interests." They are not in the least embarrassed by the fact that they are think-

ing of defending their "interests" at places far removed from their own territory. They justify the idea of achieving military superiority over the USSR and other socialist community countries by the necessity to ensure a "safety margin" or a "security margin," hypocritically stating that this superiority will be a "guarantee of peace." Persistent attempts are made to humanise the neutron bomb — the most inhuman among mass destruction weapons.

But it is not the so-called "Soviet military threat," which exists only in the delirious minds of NATO and US strategists, nor is it "international terrorism," by which they mean the progressive revolutionary-democratic movement, that threatens peace. Speaking at the 26th CPSU Congress, L. I. Brezhnev stated clearly and distinctly: "A war danger does exist for the United States, as it does for all other countries of the world. But the source of this danger is not the Soviet Union, nor any mythical Soviet superiority, but is the arms race and the tension that still prevails in the world."

As to their social character wars are divided into two kinds: just for one side but unjust for the other, and unjust for both sides. How can one define whether a war is just for a concrete state? The methodology of solving this question was given by V. I. Lenin. Marxism, he wrote, "requires a historical analysis of each war in order to determine whether or not **that particular** war can be considered progressive, whether it serves the interests of democracy and the proletariat and in **that sense**, is legitimate, just, etc."

This important methodological proposition of V. I. Lenin's is a reliable weapon in fighting bourgeois, Maoist and revisionist distortions of the character of a war. The slogan of defence of one's Motherland spread by official bourgeois ideologists was widely used in the past, during the First World War (1914-1918). Millions of working people, precisely those who had no genuine Motherland and obtained one only as a result of a socialist revolution, perished on the battlefields for the sake of this deceitful slogan. It was under a new slogan — the slogan of defence of their Socialist Motherland that the peoples of the Soviet Union heroically fought fascism, that the Vietnamese people fought courageously the American aggressors.

Lenin's proposition enables us to see clearly that today, when in the interests of monopoly capital local wars are being provoked and waged and preparations are under way for a new world war, official bourgeois ideology resorts to political camouflage, tries to pass off the selfish aims of a handful of monopolists as the interests of the nation. It is quite evident that the US government

is preparing to defend not the interests of its people but the "vital interests" of monopoly capital.

The character of a war is not constant, it may undergo changes. It sometimes happened in history that a war that was just at the beginning grew over into an unjust, predatory war. And vice versa. It is a commonly known fact that the Second World War (1939-1945) was in the beginning unjust for both groupings of imperialist powers. On the part of some capitalist countries that had become victims of nazi aggression but offered possible resistance to the invaders, the war displayed a tendency towards being just. The really just aspects of the war grew more and more evident with consolidation of the patriotic forces both on the national and the international scale. But the radical turn in the character of World War II took place as a result of the Soviet Union being forced to enter it after nazi Germany attacked our country. From this moment on the war was just for the Soviet Union and for all the progressive forces of the world.

The character of war is determined by the concrete historical epoch. In the contemporary epoch, the main content of which is the transition from capitalism to socialism on a world-wide scale, the main contradiction is that between the two opposite social systems. But this does not do away with the other contradictions of the epoch: between the working class in capitalist countries, all people of labour, and the ruling classes, the monopoly bourgeoisie above all, the most reactionary forces; between the peoples fighting for national liberation or the peoples who have already embarked on the road of sovereign development, and the imperialist powers and their colonial and neocolonial policy; between the capitalist states.

It is these contradictions of the contemporary epoch that are fraught with the possibility of war. And transformation of this possibility into reality is due to the aggressive course of the imperialist powers and the activities of the reactionary forces.

These types of contemporary contradictions determine the concrete type of war. We recall that the category "type of war" defines war as a struggle between two belligerents and discloses the character of antagonistic contradictions between them caused by economic and political relations. What types of wars are there, then, in the present epoch?

First, wars between states (coalitions) belonging to opposite social systems — capitalist and socialist.

Second, civil wars. The belligerents in these wars may be: in capitalist countries, the working

class and its allies on the one hand, and the bourgeoisie on the other; in developing countries, the bloc of progressive forces against the reactionary social forces.

Third, wars between peoples fighting for national liberation or who have already selected the way of sovereign development, and imperialist powers.

Fourth, wars between capitalist states.

However, the category "type of war" does not reflect clearly which of the opposing sides embodies the social progress and what political goals are pursued by each of them. Therefore within the category "type of war" we distinguish the category "kind of war." The notions justice and injustice pertain to the "kind of war" category. The main types of just wars are wars aimed at defending the Socialist Motherland and the gains of socialism, wars of oppressed nations and all progressive forces against the exploiter classes, and national-liberation wars.

Correspondingly, the main types of unjust wars include wars of imperialist states against socialist states, wars of exploiter classes against exploited ones within the framework of a civil war (e. g. the war waged in El Salvador by the dictatorial regime against the people of that country); colonial and neocolonial wars (such were the wars waged by Israel against the Arab countries, the war of the imperialist powers in Congo in 1960-1961, and others).

Imperialism has been and is now an ardent champion of world wars and military conflicts, it opposes all peaceful initiatives. The reactionary forces have initiated a new spiral of the arms race. The doctrine of limited nuclear war, the decision to begin full-scale production of neutron weapons, the adoption of a "chemical rearmament" programme and the decision to deploy new American missiles in Europe — these steps taken by the US Administration are one more convincing example that imperialism has not changed its nature, that it was and is the main source of wars and of a military threat in our day. US imperialism closely ties in its policy of preparing a new world war with the actions of its allies in military and political blocs, it strives to knock together a military alliance between the USA, Japan and China.

The Soviet Union, supported by the countries of the socialist community and all progressive peace-loving forces, is a constant opponent of all unjust wars, a staunch champion of peace. The whole world knows of the numerous peaceful initiatives put forward by the fraternal socialist states with the aim of eliminating the threat of a new world war, of guaranteeing the most basic right of every human being—the right to live. But nevertheless the bourgeois ideologists not only refuse to follow these initiatives but, in defiance of reality, level against the Soviet Union accusations of expansionism and of supporting so-called international terrorism. They are inflating in every possible way the myth of a "Soviet military threat." These groundless accusations are used to justify the unbridled arms race unleashed in the capitalist countries. But the world progressive public knows that the Soviet Union has always advocated peaceful solution of all questions pertaining to interstate relations.

It is true that Marxism-Leninism considered and considers liberation wars waged by the peoples of colonial and dependent countries and the nations that have chosen the sovereign road of development as just wars. More than that, the USSR and other fraternal socialist countries, guided by this teaching, have been rendering aid, including military aid, to these peoples. L. I. Brezhnev said at the 26th CPSU Congress: "Together with the other socialist countries, we are also helping to strengthen the defence capability of newly-free states if they request such aid. This was the case with, say, Angola and Ethiopia. Attempts were made to crush the people's revolutions in these countries by encouraging domestic counter-revolution or by outside aggression. We are against the export of revolution, and we cannot agree to any export of counter-revolution either."

In its activities the CPSU always combines peaceful foreign policy with tireless concern for the constant increase of the combat potential of the Soviet Armed Forces. The USSR and the fraternal countries of socialism have never threatened anybody and do not intend to attack anybody. At the same time they firmly state that talks with them from positions of strength and threats are useless. The USSR possesses everything required to secure itself and its friends against any aggression.

COPYRIGHT: "Soviet Military Review", No 8, 1982

CSO: 1812/159

MILITARY SCIENCE, THEORY, STRATEGY

MODERN DEFENSIVE TACTICS DISCUSSED

Moscow SOVIET MILITARY REVIEW in English No 8, Aug 82 pp 16-17

[Article by Major-General L. Korzun, Cand. Sci. (Military): "Modern Defence"]

[Text]

The Soviet Military Encyclopaedia defines DEFENCE as a type of combat action aimed at repulsing an offensive [blows] of superior enemy forces, protecting [holding] definite directions [areas, objectives], economising men and equipment in secondary directions and achieving superiority over the enemy on the main lines of advance. It may be forced or premeditated when an offensive is impossible or inexpedient on a tactical, operational or even strategic scale. The widest use is made of tactical defence. The Great Patriotic War convincingly demonstrated the high skill of the Soviet forces in organising and carrying out defensive actions. Modern defence, preserving many features inherent in that of the last war, has undergone considerable qualitative development.

REQUIREMENTS OF DEFENCE

Already during the Second World War various and strict demands were made on, first of all, the ability to successfully repulse massed attacks of the enemy tanks and infantry supported by artillery and aviation. To meet these demands defences had to include antitank, antiartillery and antiaircraft stability, a deep combat formation and be stubborn and active.

The demands on modern defence, maintaining in principle their character, have greatly increased.

A considerable increase in the number of tanks and other armoured equipment in the battle formations of the attacking forces has sharpened the problem of increasing the antitank element in defence. Now, tank fighting, which must be active, directed at timely detection and destruction of tanks and other armoured vehicles has become the very essence, the core of defensive actions.

In modern conditions the superiority of the attackers in the chosen directions can be very considerable. In the opinion of the American Command in order to carry out a breakthrough of defences and press home the attack at high speed it is necessary to organise a sixfold superiority in men and equipment. Besides, it is necessary to take into consideration the highly increased striking capabilities of modern weapons and combat equipment. Thus, the demand that defence should include the ability to beat off massed attacks of tanks and infantry has acquired a qualitatively new significance.

Today the combat formations of attackers may be saturated not only with great numbers of tanks but also of anti-tank weapons. In this connection fighting enemy antitank weapons also became one of the most important tasks.

Modern defence must be stable against air blows, favour a successful action against airborne and airmobile forces. Besides, it must bear a perimeter character. This is particularly important when subunits are forced to assume the defensive in the course of an advance.

All these demands can be met not by passive but by active defensive actions. Therefore a high combat activity is also one of the indispensable demands on defence.

POSITION OR MANOEUVRE DEFENCE?

A discussion concerning which defence is most advantageous in modern conditions: position or manoeuvre defence has developed recently. In principle such a setting of the question is not new. Even before the Great Patriotic War the Soviet Army Regulations foresaw the possibility to carry out both position and manoeuvre defence (or as it was then called, stubborn and mobile defence). The purpose of stubborn defence was to hold a definite terrain, to beat off the enemy offensive and defeat him, while mobile defence was intended to win time, to weaken the enemy and preserve own forces at the expense of losing the space. Here it was underlined that defence combined with the offensive actions or with subsequently assuming the offensive, particularly on the flank of a weakened enemy, can lead to his complete defeat.

That was essentially how the defenders of Moscow operated in October-November 1941. They skilfully combined stubborn defence of important lines and strong points with manoeuvre actions of tank and antitank ambushes; deliberate withdrawal to more advantageous positions with resolute counterattacks. In the final analysis all these made it possible to win time, exhaust the enemy, bring up reserves and pass over to a counteroffensive.

The experience of the Great Patriotic War, particularly the offensive operations of the Soviet forces, convincingly showed that there were no positions which could not be broken through with a properly organised and prepared offence, and effective fire.

This was borne out by the local wars in the Middle East. In 1967 the Israeli forces quickly broke through the Arab defensive positions, and in 1973, on the contrary, the

Arabs broke through the so-called Barlev Line on the eastern bank of the Suez Canal and the position defence in the area of El Kuneitra and the Golan Heights.

Thus, the practice of war solved the theoretical arguments. The great destructive possibilities of modern weapons and combat equipment including those in the tactical link, the greatly increased ability of the forces to carry out rapid manoeuvre in any terrain conditions determine the necessity for a close combination of position and manoeuvre actions in a defensive battle.

PECULIARITIES OF FIRE ATTACKS

One of the most characteristic tendencies in developing a defence both in the past and today is a steady increase of its fire power.

A skilfully organised fire system was one of the most important indicators of the effectiveness of a defence in the last war. Already at that time one of its distinguishing peculiarities was a sharp increase in the proportion of antitank fire. This tendency still persists. Antitank fire in the tactical link of contemporary defence forms the basis of the fire system, whose structure has become more complicated. It consists of areas, sectors and lines of massed, concentrated and barrage artillery fire on the approaches to it and in its depth; zones of a continuous many-fire of all types before the forward edge, on the flanks and in the depth; manoeuvre with fire and blows for the purpose of their massing in the shortest time and in any threatened direction or sector. The fire system in tactical defence must be coordinated with blows of missiles and aircraft delivered by decision and with weapons of the superior commander.

The fire weapons of tanks have also become more diverse. Alongside the fire of antitank and other guns and tanks, an antitank fire system now includes effective fire of antitank guided missiles (ATGMs) both ground and helicopter borne and also hand and heavy grenade launchers. An important role in increasing fire density in the most dangerous directions is played by manoeuvre with special antitank reserves.

In recent years the power of small arms has also grown considerably. An increase of the effectiveness of fire is also secured by the more perfected means of control, including automatic and automated systems.

When organising a fire system in defence, the commander assigns zones of fire (sectors of fire) and fire positions to subunits and fire weapons, establishes fire communication and fire protection of flanks and limiting points, fire cooperation between subunits and all other weapons in the

fire system and within subunits. On sectors not covered by gun and tank direct fire, particularly at limiting points, in gaps and on flanks, artillery fire is organised from covered fire positions. To secure perimeter defence for artillery, tanks, IFVs and APCs, alternate positions are organised, as well as additional fire sectors for firing at the flanks and rear.

PECULIARITIES OF MODERN DEFENCE STRUCTURE

The Second World War and local wars convincingly showed that defence can be effective only if its structure and engineer equipment ensure combination of position and manoeuvre defence, maximum use of the possibilities of all available fire weapons and a build-up of effort during a defensive battle. Besides the fire system and prepared air attacks the defence structure includes: a grouping of forces, a system of the defensive lines (areas) and positions, and a system of engineer obstacles.

One of the characteristic tendencies in the development of defence in the Second World War was an increase in its operational and tactical depth. In modern defence the depth of areas for such subunits as a company or a battalion remained, in the main, approximately the same as in the final stage of the Great Patriotic War. At the same time the frontage of these areas increased 2-2.5-fold, the gaps between subunits became wider. Such an increase of the defence frontage is secured by the considerably increased fire and manoeuvring capabilities of tank and motorised infantry subunits and conditioned by the interest of better defence should the enemy use a powerful destruction weapons.

Sufficient depth in defence is secured by detailing second echelons and reserves and their proper disposition on the ground. Depending on the content of the mission, composition and grouping of the enemy and peculiarities of the terrain, companies in a battalion and platoons in a company can assume a wedge or vee formation pointing forward or backward in the direction of an open flank. Commanders try to avoid a linear formation of subunits in defence. As experience of exercises shows, the vee formation favours the creation of killing grounds. But such a killing ground can be created also in the case of the wedge formation when subunits which have advanced during battle withdraw in an organised manner and decoy the attackers into a skilfully organised ambush. In some cases this function can be carried out by a subunit defending an advance position or a combat security specially organised in front of the FEBA.

Second echelons and reserves are detailed in such a manner as not to weaken subunits defending the main positions.

A great role in a contemporary defence is played by special antitank reserves, mobile obstacle detachments including helicopter-borne ones.

Competent use of the terrain, various engineer obstacles, mine fields in particular, and also the stability of modern means of mechanisation make it possible to carry out in a brief period of time a very great volume of engineer works and promote rapid creation of stable defences.

Summing up one can conclude that even in conditions of the increased possibilities of the attacking forces a skilfully organised defence is capable of repulsing an advance by superior enemy forces.

COPYRIGHT: "Soviet Military Review", 1982

CSO: 1812/159

MILITARY SCIENCE, THEORY, STRATEGY

WARTIME OPERATIONS: THE USE OF MANEUVER IN DEFENSE DISCUSSED

Moscow SOVIET MILITARY REVIEW in English No 8, Aug 82 pp 42-44

[Article by Col A. Popov, Cand. Sci. (History), under the heading "Military History": "Manoeuvre in Defense"]

[Text]

During the Great Patriotic War (1941-45) the Soviet Command made wide use of manoeuvre with men and equipment in offensive battles and operations. Resolute and energetic manoeuvre allowed the Soviet forces to repulse blows of a superior enemy, to inflict heavy losses on him, thus frustrating his plans. In this way manoeuvre played the part of the most important condition in organising an active, insurmountable defence. The possible versions of manoeuvre with men and equipment were worked up, as a rule, while the concept of the defensive battle, combat missions and the structure of the battle formation were being specified. The character of the manoeuvre and the ways of carrying it out depended on the concrete conditions of the situation, including the composition of the friendly forces, their positions, the reserves available, conditions of terrain, weather, etc. Of course it was important to have timely information on the enemy forces and intentions both before and during the defensive battle (operation).

When a grouping of men and equipment was organised correctly and in good time their density had to be strengthened only in separate directions. There was then no necessity for a radical change of battle formation and, consequently, for a large-scale, complicated manoeuvre. If, on the other hand, a mistake was made in ascertaining directions of enemy blows, considerable regroupings of forces were required.

Thorough elaboration of the plan of manoeuvre, secrecy and rapidity in carrying it out, appropriate preparation of the personnel, skilful control of units and subunits allowed the Soviet Command in the majority of cases to fulfil the assigned missions.

The manoeuvre with men and equipment of the 8th Infantry Division, holding defences at Kursk in the first echelon of the 15th Infantry Corps on the Krasnaya Slobodka-Pokhvalnaya-Saburovo line (see Sketch No. 1) on July 5, 1943 is a case in point. The division assumed a two-echelon battle formation, with two infantry regiments in the first echelon and one infantry regiment in the second echelon. At 0600 hrs the nazis launched an attack with superior forces after powerful artillery and air attacks. Thanks to skilful manoeuvring with artillery fire and the courage of the fighting men of the 8th Infantry Division, five fierce enemy attacks were beaten off.

By 1800 hrs the enemy had nevertheless managed to penetrate deep into the first defensive position. Having assessed the situation the divisional commander quickly transferred there some men and equipment of the right-flank 310th Infantry Regiment and also the antitank reserve and a mobile obstacle detachment. The enemy was stopped. The divisional commander decided to counterattack the break-through enemy in the direction of Pokhvalnaya. It should be noted that the direction of the blow, and the men and equipment involved were envisaged in the plan of the defensive battle. At first the whole of the divisional artillery and the 310th Infantry Regiment delivered heavy artillery fire on the enemy. Then a counterattack of the second echelon of the division in cooperation with the subunits of the first-echelon regiments began. As a result of blows in converging directions the forces who had penetrated the divisional defence zone were surrounded and destroyed. The enemy lost up to 800 officers and men and the whole of his combat equipment.

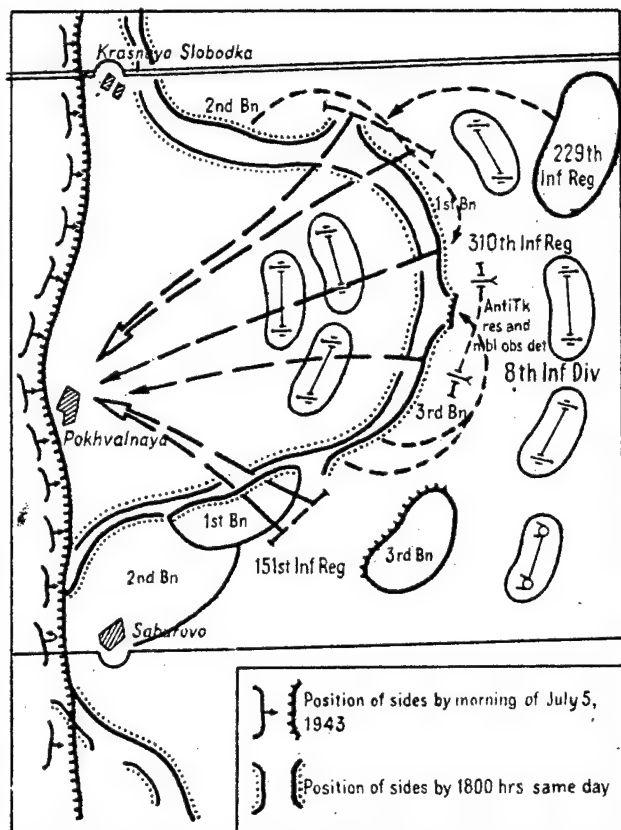
Skillful manoeuvre with artillery and its fire was of decisive significance for achieving success in a defensive battle. Characteristic in this respect was the manoeuvre of the artillery during defensive fighting of the 64th Infantry Corps in March 1945 in the Lake Balaton area in Hungary. At the beginning of the enemy offensive on March 6, we

had in the corps zone up to 100 artillery pieces and mortars. The enemy had fourfold superiority in artillery. As a result of the transfer of artillery units from other directions by evening on the first day of the fighting the number of Soviet artillery pieces in the direction of the enemy's main blow had already been doubled. On the second day, the number of guns and mortars was over 500. And on the third day of the battle formations of the corps had a seventy per cent superiority in artillery. As a result the Soviet troops forced the enemy not only to give up the attempt to advance in this direction but by the heavy losses inflicted on him ensured themselves favourable conditions for passing over to the offensive.

During defensive battles the Soviet forces often manoeuvred also with mobile units. For instance, during the battle at Lake Balaton on March 9-10, 1945 at a critical moment the commander of the 18th Tank Corps carried out a bold and rapid manoeuvre with the 181st Tank Brigade from the right flank to the left. Only a small force was left to protect the sector from which the brigade was taken. That was a risk but a risk based on an accurate assessment of the situation. And it was justified. The enemy did not get through.

It should be also noted that manoeuvre was used in the most diverse conditions of defensive battle, particularly during fighting to hold a bridgehead. The actions of the 18th Infantry Corps (see Sketch No. 2) provide an example of this. In October 1944 its formations were defending a bridgehead on the western bank of the Narew in the area south of the Polish town of Pultusk. The corps assumed two-echelon battle formation with the 37th Guards Infantry Division and the 69th Infantry Division in the first echelon and the 15th Infantry Division in the second echelon on the east bank of the Narew.

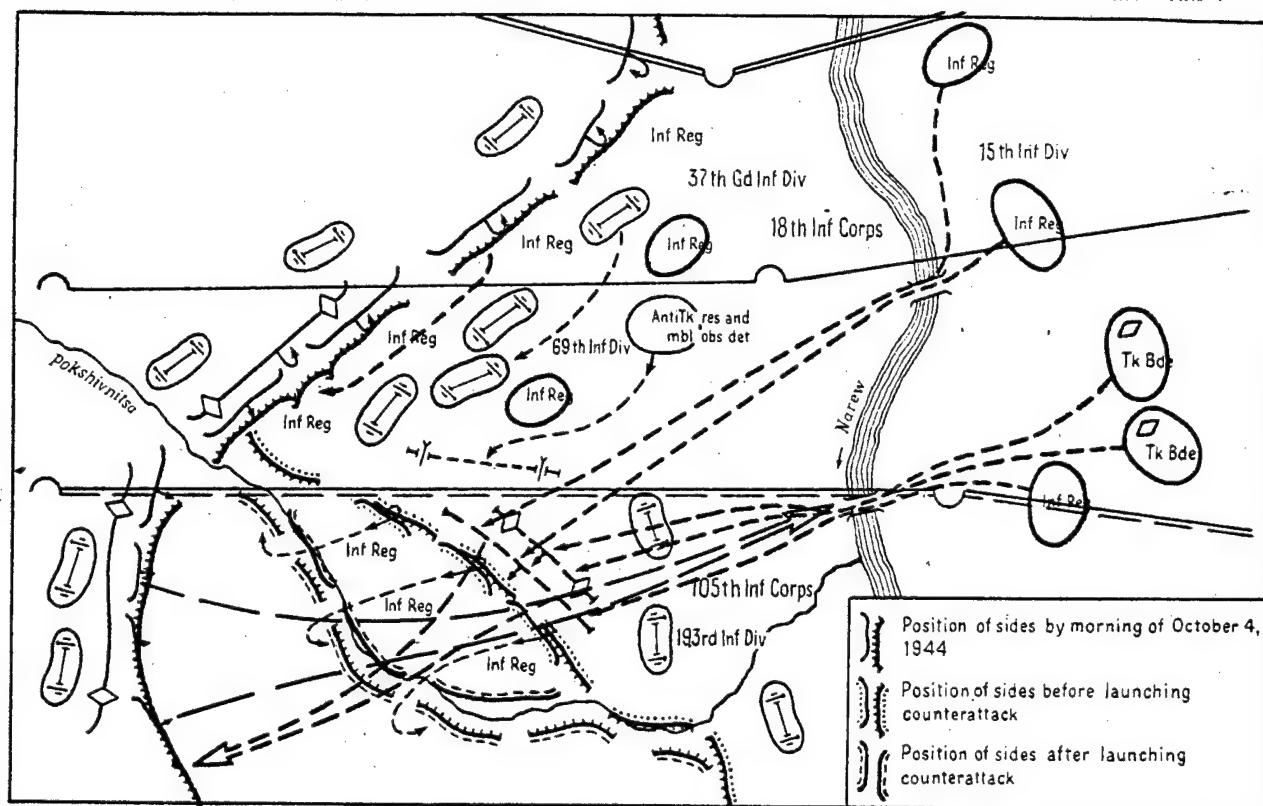
In the morning of October 4, after a powerful artillery preparation, the enemy passed over to the offensive with large forces. Units of two infantry divisions and a tank brigade reinforced with extra tanks and assault guns launched numerous heavy attacks. Their aim was to break through the infantry corps' FEBA and to liquidate the bridgehead. With the help of fire of the artillery transferred from other directions all enemy attacks were beaten off. However, having brought up reserves, the enemy delivered a powerful blow at the defensive zone of the neighbouring 105th Infantry Corps, broke through the forward line and penetrated the defences to a depth of 10-12 km. As a result the 193rd Infantry Division was forced to withdraw and that created a serious threat to the left flank and rear of the



18th Corps. In the given situation the 18th Corps commander moved his antitank reserve (a tank destroyer battalion) and a mobile obstacle detachment (a company of combat engineers) to the zone of the left-flank division. The enemy was stopped. Simultaneously the corps commander decided to counterattack the break-through enemy grouping with his second echelon — the 15th Infantry Division — by a blow in a south-westerly direction in cooperation with the reserves brought up.

Units of the 15th Infantry Division carried out an assault crossing of the Narew and in cooperation with the 15th and 17th Tank brigades of the 1st Guards Tank Corps and units of the 193rd Infantry Division after a powerful artillery attack and bomber raid counterattacked and hurled back the enemy. All further enemy attempts to liquidate the bridgehead and to destroy the Soviet forces holding it failed.

Combat experience shows that during defensive battles when the enemy had penetrated the defences division and corps commanders strived, first of all, to interdict any advance of enemy formations and units, particularly tanks, on the flanks and in the direction of an intended main blow.



For this purpose manoeuvre with artillery and its fire was used and blows from the air were struck at the main enemy grouping. Besides, the artillery antitank reserves, mobile obstacle detachments, tank reserves, subunits and units were advanced to the threatened sectors from those not subjected to attacks. For the purpose of destroying breakthrough enemy groupings and restoring the defences, formation commanders manoeuvred with second echelons and rapidly counterattacked. The bulk of the artillery and aviation was concentrated in these directions.

The actions of the Soviet forces holding defences against a superior enemy, particularly during execution of a rapid manoeuvre, demanded of the officers and men self-control and stubbornness, great moral and physical tension, high combat skill and resolve. Various forms and methods of Party-political work were used to develop these qualities in the fighting men. But the main method was that of personal contact of commanders and political workers with soldiers and Communists' personal example. Frequent use was made of radio communication as the most operative, effective and large scale means.

December 1944. Stubborn defensive fighting of the Soviet forces was going on in the north of Hungary. On a re-

connaissance Guards Lieutenant F. Dankin's tank made a swift thrust into the village of Hered. With its tracks it crushed two enemy antitank guns and destroyed several dozens of hitlerites with fire. Dankin obtained and immediately transmitted over the radio to headquarters valuable data on the enemy. This heroic feat of arms became immediately known to the brigade Command, who decided to award him the Order of the Red Star. Soon the tankmen heard on the wireless the well-known voice of the Brigade's Chief of the Political Department: "For courage and valour displayed when carrying out a combat mission, Comrade Dankin has been awarded the Order of the Red Star! Guardsmen! Follow his example, be as brave as Lieutenant Dankin." This news inspired the other tank crews. The Guardsmen fought more stubbornly.

In contemporary conditions manoeuvre with men and equipment in defence acquires still greater significance. The increased fire power capabilities, high mobility and striking capabilities of forces make a modern operation or battle most decidedly a matter of manoeuvring. That is why it is necessary to persistently train the forces to carry out manoeuvre with men and equipment in defence, to perfect their skill taking into account the experience of fighting and of tactical exercises.

COPYRIGHT: "Soviet Military Review", No 8, 1982

CSO: 1812/159

ARMED FORCES

ETHNIC RELATIONS IN ARMED SERVICES DISCUSSED

Moscow SOVIET MILITARY REVIEW in English No 8, Aug 82 pp 28-30

[Article by Maj Gen A. Skrylnik, Cand. Sci. (Philosophy), under the heading "USSR-60 Years": "In the Spirit of Friendship Between Peoples"]

[Text]

An atmosphere of collectivism and comradeship, cohesion, the friendship of all the nations and nationalities, the moral health of society, its genuine democratism and social optimism, intolerance of deviations from socialist morals, such are the main facets of the Soviet way of life.

From the Resolution of the Central Committee of the Communist Party of the Soviet Union "On the 60th Anniversary of the Formation of the Union of Soviet Socialist Republics."

The prosperity and closeness of the peoples inhabiting the USSR, mutual enrichment of their cultures under mature socialism further strengthen the socio-political unity of society and cement the internationalist friendship of the working people. Addressing the 26th CPSU Congress Comrade Leonid I. Brezhnev said it was the sacred duty of the Party to educate the working people in the spirit of Soviet patriotism and proud sense of belonging to the great single Soviet Homeland.

The contents of the internationalist education of Soviet people, army and naval personnel, its effectiveness are determined by the Leninist nationalities policy of the CPSU designed to further and strengthen the friendship of the peoples inhabiting the USSR. In the effort to build up socialism a fraternity of all nations and nationalities of the USSR has taken shape. It is now a great source of the might of the Soviet state and the invincibility of its Armed Forces.

Soviet power has abolished national discrimination. In the past many of the nationalities of the former Russian Empire were not allowed to serve in the armed forces. Under the Soviets all nations enjoy equal rights and duties in the armed defence of the multinational socialist state.

The Soviet Armed Forces embody the friendship of the peoples. Since they were founded they have been built on the principles of class fraternity of all working people regardless of their nationality.

The Leninist principles of friendship between peoples and proletarian internationalism were implemented in the organisation of the Armed Forces on a multinational basis. During the Civil War (1918-1920) multinational units and formations routed the White Guard troops and foreign interventionists.

The unification of the peoples inhabiting the Soviet Republic in a single multinational socialist state in December 1922 opened up new possibilities for progress. The contribution of each fraternal people to strengthening the material and spiritual foundations of the country's defence capacity and to educating servicemen in the spirit of friendship of peoples increased.

When the Great Patriotic War (1941-45) broke out Soviet people of all nations and nationalities joined the army and navy to defend the Socialist Homeland. The strength of the internationalist ties vividly demonstrated itself in the fierce struggle with the aggressor. Inspired by their love for the Soviet Homeland they took up arms to defend it, considering it their patriotic and internationalist duty to fight in the war against fascism.

Officers and men of all nations and nationalities fought courageously in the Armed Forces. Divisions formed in the Russian Federation, included, besides Russians, Ukrainians, Byelorussians, Lithuanians, Letts, Tatars and sons of other fraternal peoples. Divisions newly formed in the Central Asian and Transcaucasian Republics were mainly made up of personnel of indigenous nationalities, namely Uzbeks, Kirghizes, Kazakhs, Georgians, Armenians and Azerbaijanians.

Friendship between the peoples was a source of the mass heroism and indomitable morale of Soviet servicemen. Among those who were honoured with the country's highest award—the title of Hero of the Soviet Union—were sons and daughters of all the peoples of the USSR. The famous Pavlov's house in Stalingrad was defended by 24 men of six nationalities. In March 1944 a party of Marines under Senior Lieutenant I. Olshansky landed in the enemy rear, in the suburbs of Nikolayev. Warriors of eight nationalities displayed outstanding feats of valour in beating off the frenzied assaults of the enemy for two long days. Only 12 out of 67 were alive when the main body arrived.

The autographs of Soviet patriots on the Reichstag were a sort of report to their multinational Homeland. Here are a few of them: "I took part in storming Berlin. Belyaev, Moscow." "Airapetov from Baku." "I was at Berlin. Galya Dzhashi from Tbilisi."

Mass political work conducted by the commanders, political bodies, Party and YCL organisations contributed to the cohesion of the Soviet servicemen during the war. Education of the men in the spirit of friendship between peoples and proletarian internationalism helped build up the fighting morale of the troops. This enabled all the servicemen to understand Lenin's idea of defence of the single Socialist Homeland of all nations and nationalities. If the men of some units were weak in Russian mass propaganda work was conducted in their native languages. Dozens of newspapers were published by armies and army groups in many languages of the Soviet peoples.

Work with the men was conducted taking into account the missions carried out by the forces at the various stages of the war. When hostilities shifted to areas beyond the frontiers of the USSR the commanders and political workers explained to the men the great liberation mission of the Soviet Army and their duty as envoys of their Socialist Homeland. The ideas of class solidarity and humanism enabled our men to rise above the feeling of revenge. In his memoirs Marshal of the Soviet Union Georgy K. Zhukov wrote:

"Honestly, I must say that while the war was going on I was determined to repay the hitlerites in kind for their cruelty. But when our forces, having routed the enemy, entered Germany, we contained our wrath. Our convictions and sense of internationalism prevented us from seeking blind revenge."

Some Western leaders are eager to revive the lies the Goebbels propaganda machine spread about the way Soviet soldiers behaved in the countries they liberated. At the same time these Western leaders wish to absolve the SS punitive detachments of the crimes and atrocities they perpetrated in Soviet territory and other European countries. The memory of the peoples liberated by the Soviet troops from nazi slavery and history itself have refuted the subversive bourgeois propaganda. The feat of valour performed by Soviet internationalist soldiers has been honoured in perpetuity by majestic monuments erected in Berlin, Prague, Warsaw, Sofia, Pyongyang and many other cities of Europe and Asia.

Today the objective preconditions for internationalist education of the Soviet people in general and army and naval personnel in particular are much more favourable. The 26th CPSU Congress pointed out that unity of Soviet nations has never been so strong.

The Leninist Party and Soviet state strictly observe equality of rights and duties of all citizens regardless of their nationality, especially in execution of their military duty. Every Republic sends good reinforcements to the army and navy. Representatives of all the fraternal peoples of the USSR serve together in the Armed Forces. Concrete sociological studies conducted recently in the military districts and fleets have shown that, as a rule, the basic military elements — platoon and company — are made up of servicemen belonging to 10-15 nationalities.

All Soviet servicemen, regardless of their nationality, enjoy all the rights and freedoms proclaimed by the Constitution of the USSR and other Soviet laws. They also have equal possibilities for promotion in the service.

Among the factors that constantly contribute to moulding internationalist consciousness, to cohesion of multinational military collectives are service to ensure the security of the Socialist Homeland, political equality of all servicemen and the uniform requirements of the Oath of Allegiance, service regulations and manuals. Combat training, combat alert duty, socialist emulation, participation in Party and YCL life and social work instil in the men a sense of personal responsibility for the security of their Homeland and the feeling of a single family.

Formation of nationally mixed units helps in drawing closer together the young men called up for active service from every corner of the USSR. Men of various nationalities quickly establish comradely, friendly and professional contacts which enable them to accomplish their missions effectively. These ties are maintained even after the men are honourably discharged from service. Sometimes such friendly relations last for years.

Commanders, political bodies, Party and YCL organisations use the entire range of methods and means of Party-political work to educate the personnel in the spirit of friendship between the peoples of the USSR. Political education gives the men an insight into the CPSU national policy, the achievements of the Soviet Republics in building

communist society, the combat exploits and labour feats performed by people of various nationalities. Political work is conducted taking into account the national composition of units, the men's age and educational level.

Lenin lessons on friendship of peoples and proletarian internationalism are conducted in units and on ships. Thematic evenings devoted to such themes as "Our Homeland Is the USSR," "Inviolable Union of Free Republics," "The Homeland Is Dear to Everyone" are also regularly held.

The fact that local Party, government and public organisations and youth collectives exercise patronage over military units strengthens the feeling of the common Homeland, the sense of pride in the whole Soviet nation. The units of the Samara-Ulyanovsk Iron Motorised Infantry Division are always pleased to play host to delegations of workers and collective farmers of Ulyanovsk Region. The sailors of Kronstadt maintain close ties of friendship with the members of the YCL of Kazakhstan and many work collectives of that Union Republic.

Another important line in the internationalist education of the personnel of the Soviet Armed Forces is the building up of a common fighting spirit with the armies of the Warsaw Treaty countries. Joint exercises, meetings and exchange of experience in combat training and political education are a splendid school of internationalism for the officers and men of the fraternal armies.

The CPSU encourages in every possible way the spirit of friendship and unity of peoples. It inculcates in all Soviet people and all servicemen a sense of pride for the Socialist Homeland, inviolable fraternal friendship of the Soviet peoples, respect for the national dignity of members of all nations and nationalities.

The internationalist education of Soviet servicemen is a component of their unshakable morale. It inspires the servicemen in their effort to enhance their combat proficiency and strengthen discipline. The socialist emulation movement in honour of the 60th Anniversary of the Formation of the USSR has gained tremendous scope in units and ships.

By their excellent performance of their service duties and loyalty to the Homeland Soviet servicemen demonstrate their monolithic cohesion round the Leninist Party, and their readiness to execute with honour their patriotic and internationalist duty.

COPYRIGHT: "Soviet Military Review", No 8, 1982

CSO: 1812/159

ARMED FORCES

LEGAL AUTHORITY OF COMMANDER'S ORDERS DESCRIBED

Moscow SOVIET MILITARY REVIEW in English No 8, Aug 82 pp 34-35

[Article by Maj Gen N. Gusev: "The Commander's Order"]

[Text]

THE RIGHT of commanders to issue orders to their subordinates and the duty of the subordinates to carry them out is a specific feature of service in the army and navy. Orders are the main means of exercising military control, for pooling the efforts, knowledge, skill and will power of hundreds and thousands of men in pursuit of a definite purpose. The order of the commander is legally binding. The Disciplinary Regulations of the Armed Forces of the USSR lay down:

"The order of the commander is a law for his subordinates."

An order is a demand, not a request. Therefore, regardless of the time, conditions and circumstances, once a serviceman has received an order he has no right to question its expediency or necessity, to dispute the actions of the commander or enter into discussion with him. Soviet regulations and manuals forbid subordinates to criticise or discuss the orders of commanders. Why? Here is the answer to this question given by Marshal of the Soviet Union Andrei I. Yeryomenko, a distinguished Soviet leader:

"Just imagine what would happen if subordinates began to discuss an order of their commander. One would say that the commander's order was correct, another would try to prove it was wrong, and still another man would decide there was no need to hurry with the execution of the order and would do so when it suited him. This disorder will result in failure of the mission, whether big or small. If such disgraceful behaviour is permitted in battle, it will inevitably lead to defeat and loss of human life."

The commander's order must be carried out meticulously and punctually. This is a vital requirement of military discipline. Accurate fulfilment of an order in combat may often play a decisive role in securing victory. Accuracy is highly important in combat training and political education, when men are being moulded into soldiers.

Soviet servicemen are aware that the order of the commander does not express the latter's will alone. They regard the commander's order as an order of the Homeland, of their people, for an officer, praporshchik or sergeant is a spokesman of the state in the army. He is invested with powers legally confirmed by the service regulations and manuals. Soviet officers and men are class brothers, they share a common world outlook and common political convictions. The social homogeneity of the USSR Armed Forces reflects the moral and political unity of mature socialist society, the common aims and interests of both superiors and subordinates — builders and defenders of communist society. This forms the basis for their official relations, mutual trust and respect.

While establishing the obligatory character of obedience of subordinates to commanders and superiors in general, the service regulations and manuals proceed from the fact that disciplinary requirements stem from the interests of duty, of the cause they are serving, and not from personal motives. Soviet soldiers and seamen are not mechanical executors of orders. Together with their commander they bear responsibility for the execution of the missions assigned and the state of affairs in the subunit. Therefore, though implicit obedience is required of subordinates, it is highly important that they should see the purpose of the commander's orders and instructions. That is why an officer must be skilled in the art of convincingly explaining to his subordinates the purpose of his orders. Of course sometimes the purpose may be evident without special explanations. Marching drill orders are a case in point.

To maintain a high level of combat readiness and high discipline standards, to ensure effective fulfilment of missions assigned to the men the commander must use his right to issue orders and persistently secure obedience of the men in any

situation. Mikhail V. Frunze, a distinguished Soviet military leader said:

"An order is an order. Exhortation and persuasion of subordinates to carry out orders are of themselves gross violations of discipline."

In the issuing and execution of orders the laws governing and reflecting the psychology of the individual and military collective (team), the principles regulating relations between servicemen

that take shape in the process of their joint work inevitably manifest themselves. If the commander is unable to take this into account, it will create a psychological barrier between him and his subordinates, causing them to doubt the soundness of his actions and orders. The subordinates will naturally carry out such orders without displaying initiative, only because they have to execute them. This may cause failure to fulfil a correct decision.

At a tactical exercise the motorised infantry platoons under T. Pankratov and K. Demidov were ordered to organise the ground for defence with engineer works. Lieutenant T. Pankratov summoned his section leaders and assigned clearcut missions to them. He told them what to do and when to do it and suggested the best way of doing it. The officer was smartly dressed, he was completely in command of the situation and gave clear and brief orders. His very tone seemed to suggest that he had weighed and carefully thought out everything. He did not have a shade of doubt as to the success of his assignment.

Lieutenant K. Demidov was quite different. He summoned the section leaders for briefing with some delay. His orders lacked concreteness and the very tone of his voice was dull. The results were different too. The first platoon engaged in socialist emulation in meeting the time and quality standards in fulfilling the assignment. The men of the second platoon were slack. And the company commander had to intervene to help Lieutenant K. Demidov execute the assignment.

In issuing an order the commander must give thought to every detail of the mission he intends to assign to his subordinates and must spare no pains to ensure its fulfilment.

The form in which an order is issued is important too. A categorical, confident order stated in clearcut terms rules out all doubt, therefore, these requirements are imperative with respect to the form of any order or command. The officer's entire behaviour should convince his subordinates that his order will ensure successful accomplishment of the mission. This is particularly important in combat.

The force of an order is directly dependent on the competence of the commander and his moral prestige. Officers holding identical posts and having the same rank do not always command the

same prestige. Far from it. In a combat situation the commander's prestige increases the force of his orders. If the men feel that they are under an intelligent, experienced and competent commander on whom they can rely, they will go bravely into battle.

The commander's observance of the regulations in issuing orders also has a definite effect on the subordinate. The observance of regulation requirements, i. e. of the forms, is not a formal act. It has a definite purpose, namely to draw the attention of the subordinate, to emphasise the importance of what the commander is saying, to inspire confidence in success, rule out a negative approach on the part of the subordinate. These functions give weight and importance to the order.

The battalion under Captain V. Kundyukov has been securing good results in combat training and political education for several years now. It is distinguished for its high disciplinary standards. Its officers and men invariably live up to regulation requirements. The officers' experience in working out decisions and making them known to the subordinates merits attention. They have worked out a procedure to which they adhere. Before giving an order an officer decides to whom the mission will be assigned and who will be responsible for its execution, he thinks of the form of the order to be issued in order to make it convincing and to ensure a mobilising effect, to determine clearly the volume of work, the time needed to fulfil it, the procedure for reporting execution, the material necessary for the mission; to provide for encouragement of efficient execution of the order, for control over execution of the order, to think out the forms in which the opinion of the collective, activists, Communists and YCL members should be used to promote efficiency and proficiency.

Regardless of whom the commander's order is addressed — whether to a subunit or an individual soldier, it is invariably perceived individually, it is "refracted" through the intellect of each soldier. Therefore, the officer must see with his mind's eye how his order will be received by the subordinate or subordinates. Everything is important here: the psychological condition and feelings of the individual men and of the entire collective, the traditions that have taken shape in the subunit, the level of cohesion, the interests and capabilities of the subordinates.

The commander's order is a complex and responsible act in his official duties. His knowledge, experience, will power, skill and ability to understand his men and establish official relations with them all merge in the order.

COPYRIGHT: "Soviet Military Review", No 8, 1982

CSO: 1812/159

ARMED FORCES

WARTIME OPERATIONS: THE DEFENSE OF THE CAUCASUS DISCUSSED

Moscow SOVIET MILITARY REVIEW in English No 8, Aug 82 pp 40-41

[Article by Col L. Kozlov, Cand. Sci. (History), under the heading "Military History": "The Defence of the Caucasus"]

[Text]

Among the events of the Great Patriotic War the Battle for the Caucasus occupies an important place. Combat actions in the area between the Black and Caspian seas went on for more than a year [from July 25, 1942 to October 9, 1943]. This article deals with the defensive period of the Battle for the Caucasus, which lasted up to the end of December 1942.

In the summer of 1942, the Nazi Command concentrated its main efforts on the southern sector of the Soviet-German front. It paid the main attention to capturing the Caucasus — a very rich economic area where more than three fourths of the overall output of oil in the USSR was extracted. At a meeting held at the Headquarters of Army Group "South" on June 1, 1942 Hitler declared that "if he does not get the Maikop and Grozny oil he will have to put an end to this war."

In accordance with the plan for the capture of the Caucasus code-named "Edelweis," the Nazi Command intended, first of all, to seize the North Caucasus. Then it planned to outflank the Greater Caucasian Range on the west and east and, breaking through the passes in the north, to capture the Transcaucasus. Upon reaching the Transcaucasus the Nazi military-political leadership hoped to establish its control over the Black Sea and to force Turkey to enter the war against the Soviet Union. By this time 26 divisions of the Turkish Army were already deployed along the Soviet-Turkish border. Finally the enemy planned to create the necessary prerequisites for an invasion of the Near and Middle East.

The Nazi ring leaders did not doubt that discord which according to their calculations would set in among the peoples of the Caucasus would favour the realisation of the "Edelweis" plan. With this purpose in mind they carried out a policy of setting one nation against the other, spread

rumours about alleged "loyal" and "friendly" attitude of Nazism towards the peoples of the Caucasus.

In the second half of July the formations of Nazi Army Group "A" comprising 167,000 officers and men, 1,130 tanks, 4,540 artillery pieces and mortars and up to 1,000 combat planes approached the lower Don. This powerful grouping was to encircle and destroy by converging blows at Tikhoretsk the Soviet forces south and south-east of Rostov and then to capture the North Caucasus.

The enemy grouping was faced by the forces of the Southern Front under General R. Ya. Malinovsky and some forces of the North-Caucasian Front commanded by Marshal S. M. Budyonny. They numbered 112,000 officers and men, 121 tanks, 2,160 artillery guns and mortars, 130 aircraft and were considerably inferior to the enemy.

The Soviet forces were faced with a very difficult task: to stop the enemy, exhaust him in defensive battles and prepare the necessary conditions for passing over to a resolute offensive. The fighting which developed at the time on the approaches to Stalingrad favoured the fulfilment of this mission. It attracted the enemy forces like a magnet thus facilitating the struggle of the Soviet forces in the North Caucasus.

On July 25, the Nazi formations passed over to the offensive. Forcing the Don, the enemy struck blows in the Salsk, Stavropol and Krasnodar directions. The Soviet forces could not contain the superior enemy forces and withdrew behind the Manych Channel. On July 28, the Nazis managed to carry out an assault crossing of this latter. Thus there was a serious danger of a breakthrough by enemy tank and motorised forces deep into the Caucasus.

In order to improve the leadership of the forces the Supreme Command GHQ united the Southern and the North-Caucasian fronts into the North-Caucasian Front under Marshal S. M. Budyonny. Simultaneously by order of GHQ the Transcaucasian Front under General I. V. Tyulenev held defensive lines along the Terek and Urukhs rivers and the

passes of the central part of the Greater Caucasian Range. A multizone defence was created in the Grozny and Makhachkala sectors. Four special strike detachments, each consisting of 500 Communists and Komsomol members were moved to the most dangerous sectors. They were formed under supervision of Brigade Commissar L. I. Brezhnev, General V. F. Vorobyov and Colonels V. I. Rozhkov and S. I. Svintsov.

The commanders and political workers carried out intensive work to mobilise the fighting men for a decisive rebuff to the enemy. They made competent use of the patriotic enthusiasm which swept over the entire peoples of the Caucasus. Addresses and letters of the working people of Georgia, Armenia, Azerbaijan and other Republics, National Territories and Regions, expressed belief in the indestructible power of the beloved army, readiness to help it to stop and destroy the enemy. The army newspaper "Hero of the Motherland" published an appeal of the oldest representatives of the peoples of the Kabardin-Balkar and Chechen-Ingush Autonomous Soviet Socialist Republics to all peoples of the Caucasus. It read in part: "We, peoples of the North Caucasus know that our strength lies in our indissoluble friendship and the fraternal help of the great Russian people. Let us therefore rise as one man without distinction of age or nationality for a sacred war against the hitlerite murderers and tyrants. We shall win the desired victory in a mortal clash with the hated enemy."

At that difficult time the local Party and Soviet organisations rendered the front all-round assistance. Many thousand Communists and Komsomol members of dozens of nationalities joined the ranks of the fighting men and national fighting units and formations and partisan detachments were formed. In a short time the production of mortars, submachine guns and ammunition at factories and works of the Transcaucasus was increased. Tens of thousands of working people participated in building defensive lines.

On August 6, the nazi forces availing themselves of their considerable superiority in men and equipment, carried out an assault crossing of the Kuban near Armavir and mounted an offensive against Maikop and Krasnodar. By August 17, the Soviet forces stopped the enemy in bloody battles in the foothills of the western part of the Greater Caucasian Range.

At the end of August-beginning of September heavy fighting ensued in the Novorossiisk sector. The forces of the 47th Army repulsed continuous attacks of the nazis trying to capture Novorossiisk. In the area of the Volchi Vorota Pass the battery of Senior Lieutenant V. Lavrentyev courageously fought the enemy. The gunners held their positions to the last shell. When the ammunition was ex-

hausted they blew up the guns and jointly with the Marines engaged the enemy in hand-to-hand fighting.

On September 7, enemy units broke through to the northern outskirts of Novorossiisk. Street fighting ensued. Our soldiers fought for every block and every house. Frequently hand-to-hand fighting broke out, separate buildings changed hands time and again. Acting regardless of every-

thing and committing to action new fresh forces the enemy rushed forward. On September 9, he was stopped on the city's eastern outskirts in the area of the "Oktyabr" Cement Works. All his attempts to penetrate deeper failed. The Soviet forces firmly held positions here until they assumed the offensive and completely liberated Novorossiisk in September 1943.

By the end of September 1942 the situation in the North Caucasus became less tense. The Supreme Command GHO reinforced the Soviet forces holding defences there and they delivered frequent and strong blows at the enemy. However, the nazi Command did not abandon its plans to capture the Caucasus. On September 25 the enemy mounted an offensive in the direction of Tuapse, but it failed.

Early in November the enemy was stopped in the Grozny and Ordjonikidze sectors. His plans to capture the Grozny and Baku oil had failed thanks to the courage and staunchness of the fighting men of the Northern Group of Forces of the Transcaucasian Front. An example is the heroic feat of arms performed near the village of Marilyudovka by antitank rifleman brothers Dmitry and Ivan Ostapenko. In a single day they destroyed 20 nazi tanks, 13 of them being disabled by Dmitry. He was awarded the title of Hero of the Soviet Union while Ivan was decorated with the Order of Lenin.

The enemy made desperate efforts to break through to the Transcaucasus through the passes in the central part of the Greater Caucasian Range. But thanks to the measures taken by the Soviet Command beforehand and the heroism of the fighting men this threat was liquidated.

In December 1942, the front line in the Caucasus was stabilised. The defensive period of the Battle for the Caucasus ended. At the cost of heavy losses — the nazi Army Group "A" lost more than 10,000 officers and men — the enemy had only managed to reach the foothills of the Greater Caucasian Range and the Terek River. He was unable to break through to Baku and the Transcaucasus or to approach the east coast of the Black Sea. Hitler's "Edelweis" plan had failed.

The defence of the Caucasus was of great military-political and strategic importance. It was carried out in close cooperation with the actions of the Soviet forces at Stalingrad. These actions exerted an exceptional influence on the course of the fighting for the Caucasus. The stubborn

defensive fighting and later the counteroffensive of the Soviet forces at Stalingrad not only prevented the Nazi Command from reinforcing its Caucasian grouping but forced it to take away some formations from the Caucasus and transfer them to Stalingrad to help the forces encircled there.

The defence of the Caucasus vividly demonstrated the vigour and strength of the friendship between the Soviet peoples. In those battles Russians and Georgians, Ukrainians and Armenians, Byelorussians and Azerbaijanians, representatives of dozens of nationalities of the Caucasus and other areas of the country fought the enemy shoulder to shoulder. Fighting for the freedom and independence of their Socialist Motherland they held out and were victorious.

COPYRIGHT: "Soviet Military Review", No 8, 1982

CSO: 1812/159

AIR FORCES

USSR AIR FORCE CINC, CHIEF MAR P. KUTAKHOV ARTICLE ON AVIATION DAY

Moscow SOVIET MILITARY REVIEW in English No 8, Aug 82 pp 8-11

[Article by P. Kutakhov, Commander-in-Chief of the Air Force, Deputy Defence Minister of the USSR]

[Text]

The Soviet people marks one of its national holidays — USSR Aviation Day — in an atmosphere of high political and labour activity and of monolithic cohesion around the Communist Party and its Leninist Central Committee. The Soviet people's thoughts and deeds in these days are directed at implementing the historical decisions of the 26th CPSU Congress and worthily meeting the 60th Anniversary of the Formation of the Union of Soviet Socialist Republics. A new upsurge of labour enthusiasm and inspiration of the masses followed the decisions of the November 1981 Plenary Meeting of the CPSU Central Committee and the 6th Session of the USSR Supreme Soviet.

Like all the Soviet people, the men of the Army, Air Force and Navy live in unity of heart and

thought with their Motherland. They persistently improve their combat skills, learning to defeat a strong and well-equipped enemy. Soviet servicemen spare no pains to enhance combat readiness and vigilance, guarding unflinchingly the country's security and protecting reliably the Soviet people's peaceful and creative labour.

Concern for combat readiness is necessitated by the vital interests of the Soviet state and the increasing tenseness of the international situation. Inflating the slanderous myth of a "Soviet military threat," aggressive imperialist circles in the USA and other NATO countries are feverishly whipping up the arms race aimed at achieving military superiority.

Accelerated implementation of NATO's sinister

plans for deployment of new American medium-range nuclear weapons in Europe, development and production of new weapons systems, including neutron, binary and laser weapons, attempts to aggravate the situation in the Middle East, Africa, Southeast Asia and the Caribbean, and feverish formation of a Washington-Peking-Tokyo military-strategic alliance at a high pace are increasing the danger to peace and international security.

American imperialism interferes unceremoniously in the internal affairs of the Polish People's Republic and many other states. Jointly with the Chinese and Pakistani leadership, and also with other reactionary forces, the USA is waging an undeclared war against Afghanistan.

In face of the ever increasing threat from imperialism's aggressive circles the Communist Party and the Soviet Government are striving persistently to give practical implementation to the Peace Programme for the 1980s adopted by the 26th CPSU Congress, keeping a vigilant eye on the intrigues of the enemies of peace and showing constant concern for strengthening the country's defence capability and maintaining the Armed Forces in the state of constant combat readiness.

Speaking at the 26th CPSU Congress, L. I. Brezhnev said: "...the Party and the Government did not for a single day lose sight of questions related to **strengthening the nation's defence potential, its Armed Forces**. The international situation obliges us to do so."

The military might and combat readiness of the Soviet Army and Navy have reached a qualitatively new level. Their abundant technical equipment guarantees reliable protection of the state interests of our Motherland.

Combat readiness is the crowning of the troops' proficiency in peacetime and the key to victory in war; it is the state and degree of the forces' preparedness for immediate and successful execution of combat missions.

Worthily meeting USSR Aviation Day, Soviet airmen are well aware that high constant combat readiness of air units and subunits is ensured by strenuous military labour and depends largely on the efforts of each serviceman; it is forged daily during combat alert duty and everyday training in classrooms, on firing ranges and aerodromes, in long flights and training air battles.

High combat readiness requires that the Air Force personnel tirelessly perfect their military, technical and political knowledge, skilfully handle their intricate weapons and equipment and strive

to achieve high results in combat training and political education.

Therefore, military councils, commanders, political bodies, Party and YCL organisations concentrate their activities on improving the process of instruction, which depends to a high degree on the professional and methodical skills of its organisers, first and foremost of commanders and instructors, and on how they train and educate their subordinates and control crews, subunits and units in different combat situations. The combination of ideological conviction, the commander's will and developed operative and tactical thinking and military and technical outlook with the highest proficiency and skilful use of combat equipment is the basis for successful activity of air commanders at all levels.

Marshal of the Soviet Union D. F. Ustinov, Member of the Politbureau of the CPSU Central Committee, Minister of Defence of the USSR, said:

"The personnel's ideological and political steeling, high combat skills and ability to withstand great moral, psychological and physical loads are major components of combat readiness."

In modern conditions airmen must not only display deep knowledge, perfect team-work in battle and excellent air training standards, but also high spiritual qualities, sound ideological steeling, staunchness, political awareness, thorough understanding of their missions, the ability to endure enormous moral, psychological and physical loads, and retain their will to win in any situation.

All these qualities are developed in the process of the personnel's ideological, political and military training based on further study and propaganda of Lenin's ideological and theoretical legacy, the decisions of the 26th CPSU Congress, subsequent resolutions adopted by the CPSU Central Committee, L. I. Brezhnev's works and speeches bearing on questions of home and foreign policy, strengthening the country's defensive potential and enhancing the combat might of the Army, Air Force and Navy.

Commanders, political workers, Party and YCL organisations in units and subunits strive to achieve a deeper insight into the airmen's spiritual world, to accomplish in a more purposeful manner their political, military and ethical education and inculcate the qualities characteristic of politically mature and competent air fighters. They spare no pains to turn servicemen's political knowledge into ideological convictions, thereby

providing the basis for moral standards of behaviour and a conscientious attitude to their service duties.

Perfect knowledge of the design of modern weapons and combat equipment and their competent handling are decisive factors ensuring airmen's high training level and hence combat readiness. The weapons entrusted to them must be in good repair and ready for action at all times so that the personnel can use them with maximum effect in any weather and tactical situation, by day and by night.

With the might of combat equipment and weapons constantly growing, it is necessary to learn to make full use of their combat potential, i. e. to destroy the enemy at great distances, with the first salvo, launch or approach and to take advantage of their speed, altitude, manoeuvrable, protective and other qualities. To cope with this task, neither time nor effort must be spared.

The personnel's high tactical, fire and technical proficiency is a major criterium of combat readiness.

Tactical skill has always been a decisive indicator of a pilot's professional maturity and readiness to engage the enemy. It helped front-line fighters to find the shortest ways to victory over a strong, technically well equipped and often numerically superior enemy. It is not fortuitous, therefore, that it was they who called tactics "the pilot's second weapon." And we can add without exaggeration: a weapon at times no less formidable than guns, bombs and missiles. That is why, showing constant concern for airmen's all-round training, commanders, political workers and staff officers focus their attention on tactical training.

Tactics is a creative matter. It rests on profound knowledge of many components, e. g. combat potentialities of own and enemy's weapons and equipment, knowledge of their use in battle and of the methods and techniques of fighting in countless situations, which are practically impossible to foresee or memorise. Therefore, most important in this respect is development of creative thinking and the ability to assess the situation quickly and without error and to take correct decisions and implement them.

To enhance combat readiness makes it an urgent necessity to intensify the search for optimum use of aviation jointly with the land forces in con-

ditions of unified control of troops and weapons of different kinds participating in battle.

Modern tactics is closely linked with a number of other branches of aviation. A pilot or group leader will not always be able to put into effect even the most brilliant tactical concept and use to advantage the combat potentialities of modern aircraft unless he has thoroughly studied aircraft equipment, aerodynamics, the specifics of the aircraft's behaviour in different flight conditions and all the "secrets" of its operation in the air. A pilot cannot be considered completely ready for flights unless he is well grounded in the theory of manoeuvring, air navigation and combat use of aircraft or if he fails to calculate the basic parameters of a combat flight and model an air combat or a strike at ground targets. Consequently, the task of improving the flying personnel's tactical proficiency should be solved in close unity with profound study of aircraft equipment, aerodynamics and other special subjects.

Modern battle being characterised by swift and daring attacks, victory can be scored only by him who handles equipment excellently, can use new tactical methods competently and deliver accurate fire from any position. It is quite evident that a pilot's failure to hit an air or ground target with on-board weapons will inevitably entail failure to fulfil the combat mission, thus reducing to nil the efforts of a huge collective. Such occurrences cannot be tolerated, for the main thing for an airman, whether fighter or bomber, is to be able to hit the target at the first attack, with the first bomb, missile or projectile. Proceeding from this, commanders at all levels see to it in the first place that the personnel regard every bombing or fire mission as a combat sortie evaluated on the basis of final results, i. e. by the quality of the attack and fire effectiveness. Of particular significance in preparing airmen for actions in complicated situations is instilling in them a feeling of great responsibility for the ultimate goal of the flight, namely, fulfilling the assigned mission with minimum effort and in the shortest time possible.

However, in improving the combat proficiency of Air Force flying personnel it is most important to ensure not only an individual airman's proficiency, but also perfect team-work of every crew, flight and squadron. The development of the Soviet Armed Forces testifies that they are increasingly provided with crew-served weapons calling

for well-coordinated and quick actions on the part of the personnel.

Efficient execution of flying missions is inseparably connected with flight safety. To ensure this safety is a matter of state importance. In this respect, commanders, political workers, staff officers, engineers and Party organisations concentrate their attention on improving the airmen's special training level, proficiency, and engineering competence in servicing and operating weapons and equipment.

It is quite natural that in determining the degree of a crew's or subunit's combat readiness each commander perfectly realises that serviceability and constant readiness of the air fleet for action is the main material condition of success in battle. Much attention is therefore given in air units to operational reliability, timely and qualitative inspection and maintenance with minimum expenditure of work force and materials, and to the search for new rational methods of using the materiel.

Success in ensuring high combat readiness, effectiveness and quality of training are inconceivable without strong discipline, organisation and efficiency in units and subunits. The attention of commanders, staffs, political bodies, Party and YCL organisations is constantly focussed on organising the entire tenor of military life according to the requirements of orders and regulations, for it creates favourable atmosphere for continuous improvement of the forces' combat readiness.

An important role in enhancing constant combat readiness of units and subunits is played by Party-political work aimed at educating Soviet airmen in the spirit of selfless service of the Motherland and a conscientious attitude to one's service duties, in the spirit of Soviet patriotism and socialist internationalism. The main content of Party-political work is active mobilisation of the personnel for enhancing the effectiveness and quality of combat training, improving air proficiency, ensuring flight safety, mastering new weapons and equipment, and strengthening military discipline and organisation.

Soviet airmen meet the USSR Aviation Day with new successes in combat training and political education. As a result of the strenuous work of commanders, political workers, staffs, Party and YCL organisations the air training standards of the

personnel have considerably improved and the number of excellent units and subunits, and of individual pilots and navigators — who are masters of combat use of their equipment or snipers — has considerably increased.

Utter devotion of air force personnel to the cause of the Party and to heroic traditions, and their deep understanding of their duty towards the Motherland were convincingly demonstrated once again during the "Zapad-81" exercise, which became a test of air units' and subunits' combat training level and of their readiness to carry out any assignment of the Motherland in defence of the Soviet people's socialist gains and peaceful labour.

Socialist emulation for worthily meeting the 60th Anniversary of the Formation of the USSR under the motto "Reliable defence of the Soviet people's peaceful labour!", which has spread in the Soviet Armed Forces, is an effective method for achieving high results in studies and practical training, maintaining a high degree of combat readiness and further improving air training level.

Units and subunits commanded by officers V. Sadikov, V. Mokhov, V. Malei, V. Baskakov, A. Mikhailov and others, winners in socialist emulation, have achieved new successes in perfecting their professional training standards and enhancing combat readiness during the current academic year.

The CPSU Central Committee and the Soviet Government highly assess our airmen's military labour. Every year, for excellent results in combat training and political education hundreds of the best representatives of the Air Force are honoured with government awards, and those who have particularly distinguished themselves are awarded the title of Merited Military Pilot or Merited Military Navigator of the USSR.

In response to the fatherly concern shown by the Party and the Government, Soviet airmen continue to enhance their vigilance, combat readiness and military skills. True sons of their people, rallied round the Communist Party and its Leninist Central Committee in a monolithic combat formation with the fighting men of other services of the Soviet Armed Forces and the armies of the Warsaw Treaty countries, they will always reliably defend socialist gains and safeguard universal peace.

COPYRIGHT: "Soviet Military Review", No 8, 1982
CSO: 1812/159

GROUND TRAINING FOR PILOTS DESCRIBED. PART 2: FLIGHT PREPARATION

Moscow SOVIET MILITARY REVIEW in English No 8, Aug 82 pp 14-15

[Article by Col Yu. Leonov, Military Pilot 1st Class, under the heading "Combat Training": "Pilots' Ground Training"]

[Text]

The aim of flight preparation is to ensure success of air missions and guarantee flight safety. Based on relevant instruction documents, it is tied in with definite exercises as regards content, scope and duration.

Flight preparation is generally divided into advance, preliminary and preflight preparation.

The purpose of advance preparation is to deepen the flying personnel's theoretical knowledge of aerodynamics, aircraft equipment, tactics and other subjects necessary for forthcoming exercises envisaged by the next month's plan.

After the results for the preceding month have been summed up and missions for the next month assigned, squadron commanders normally inform each pilot of the exercises he will have to perform. Each officer has a special notebook where he writes down the numbers of the exercises planned and the list of literature to be studied.

During the hours allotted by the time-table pilots make an independent study of questions bearing on the content and methods of performing the exercises. If need be, they draw up a concise synopsis with the necessary formulas, diagrams, tables and graphs.

Under the flight or squadron commander's guidance the officers then study relevant sections of aerodynamics, tactics, aircraft equipment and combat use, proceeding from a specific assignment. In the event of advanced flying exercises, for instance, a diagram of the aerodynamic forces on the banked turn is drawn, and formulas of the turn radius, g-load and time are deduced. When preparing to perform tactical exercises methods for overcoming likely enemy air defence are considered, and in preparation for exercises in accelerating the aircraft to maximum permissible speed the peculiarities of supersonic nozzle functioning, stability and controllability are studied. When analysing exercises in combat use of aircraft against ground targets, losses of height in going into and coming out of a dive with different g-loads and ranges at which it is most advantageous to begin and cease firing are calculated.

Notebooks for advance preparation should be small enough to go into a flying suit pocket and should contain a set of patterns of flight for the main and most complicated exercises showing all necessary calculations. Pilots will then have more

time to study documents and special literature.

A central place in pilots' ground preparation goes to preliminary preparation. The work of all commanders, staff, various services and the entire flying personnel during this period is aimed at preparing to carry out concrete flying missions on the forthcoming flying day or night. Preliminary preparation begins with assignment of a flying mission in the form of a verbal order.

Here is an example of the most rational distribution of time for a day of preparation:

09.00-10.00 hrs — assignment of mission to flying and engineering command personnel and to commanders of supporting units, and drawing up of tentative plan tables by squadron commanders. During this period the flying personnel fill in documents on the preceding flying shift.

10.00-10.30 hrs — analysis of flights and assignment of missions to the flying personnel on a unit scale.

10.30-11.00 hrs — analysis of flights and assignment of missions in squadrons.

11.00-15.00 hrs — independent preparation and training with the use of special equipment.

15.00-16.00 hrs — training in craft (helicopter) cockpits.

16.00-17.00 hrs — checking of flight readiness of section, squadron and regiment, and rehearsal of air missions on the ground.

In assigning the general mission the commander pays special attention to the most complicated and newly-practised tasks, complete and satisfactory fulfilment of the items contained in the forthcoming day's (night's) plan table, and to ensuring flight safety. He also sees to it that maximum use is made of graphs, diagrams, tables, patterns of flight missions and other aids, and that

methods and sequence of carrying out complicated and new flight missions, and also safety precautions are expounded in detail

Following this the flying personnel go to their respective classes, where squadron commanders set tasks to each crew giving detailed explanation of methods and sequence of carrying out the assignment, likely mistakes and ways of correcting them, and safety measures.

Independent work, the main form of flight preparation, is carried out under the guidance of flight commanders. Officers study thoroughly the content and sequence of assignments, piloting technique, probable mistakes and methods of correcting them, prepare flight charts, plot and analyse flight routes, draw up navigators' plans, make calculations for combat use with weather conditions expected and study targets and safety measures.

In so doing, pilots use the notes in their advance flight preparation notebooks, to which they subsequently refer, without copying them out in their working notebooks, these being used for additional specifying data and calculations for performing the flight successfully in definite conditions.

It is difficult to give an exhaustive answer regarding the volume of notes to be made. Everything depends both on the commander's decisions and on the pilots' abilities and training level. However, all exercises to be performed during flights should be reflected in a degree ensuring their successful execution. If some exercises are being worked up for the first time, reference should be made to pages or dates on which these exercises were worked up in preliminary preparation.

The importance of modelling (also reflected in working notebooks) can hardly be overestimated, for it

enables the pilot to carry out missions with maximum efficiency. Therefore, commanders pay much attention to modelling, striving to get each pilot to have patterns of forthcoming assignments.

Working notebooks are kept after a unified pattern. Eight to ten pages are devoted to description of functional duties, diagrams of landing approach in complicated conditions with regular or alternate aerodromes used, diagrams of practice range, zones and night start, and to other reference data. These are followed by day-to-day entries on flight preparation. The notebook ends with extracts from orders and directives on flight preparation.

During independent training each pilot trains on special equipment and then in the aircraft cockpit under the flight commander's supervision.

On the unit commander's instructions preliminary preparation in each squadron is supervised by flying command personnel appointed for the purpose during the assignment of the mission.

Preliminary training ends with an individual or group checkup. An individual checkup, the most exhaustive form of checking, is obligatory for each section. Knowing the mission and exercises planned, the commander has talks with pilots to find out whether or not this or that question has been adequately worked up. Section commanders report readiness for flights to squadron commander, and the latter to unit commander. The pilot's admission to flights is recorded in his working notebook.

Group checkup merely supplements the individual check. As a rule, it is carried out on a squadron or unit scale when performing group flights in common combat formation or before a flying tactical exercise, i.e. on occasions when it is required to work up questions of cooperation of crews and groups between themselves and with ground control points. The main form of group checkup is stage-wise (from takeoff to landing) introduction of narratives. Maximum attention is naturally given to the most complicated and responsible stages of the flight, in which there may be violations of flying rules or safety precautions.

Rehearsal of the flying mission on the ground is another effective form of checkup, aimed at practising cooperation in motion. It is done on a special ground representing the flight area with characteristic reference points, flight route, practice range with the layout of targets or area of combat operations.

Preflight preparation, the final stage of flight preparation, is carried out immediately before the beginning of a flying shift. During this period the flying personnel undergo a medical checkup, study the influence of actual weather conditions on performance of flight missions, specify the air, ground and ornithological situation, data on functioning of communication and radio-support facilities, make the necessary calculations and have practical training.

It should be stressed in conclusion that thorough all-round ground training of pilots guarantees success in the air and their moral and psychological readiness for coping with any unforeseen situation.

COPYRIGHT: "Soviet Military Review", No 8, 1982

CSO: 1812/159

FLIGHT SAFETY: HELICOPTERS AND OBSTACLES

Moscow SOVIET MILITARY REVIEW in English No 8, Aug 82 pp 22-23

[Article by Eng Lt Col Yu. Malakhov, Cand. Sci. (Technology)" "Helicopters and Obstacles"]

[Text]

FLIGHTS of helicopters near the ground (irrespective whether they are performed by day or by night, in simple or complicated weather conditions) entail considerably increased physical and psychological stresses on the crews. This is the main cause, according to foreign experts, of the majority of flight accidents. The magazine of the American Helicopter Society affirms that during the past five years over 21 per cent of all flight accidents with helicopters have been caused by collision with obstacles. Most often helicopters collide with trees, bushes, communication wires and power lines.

Therefore it is quite natural that safety control of helicopter flights when they may come across obstacles is a most important mission. To cope with it requires at first to reveal the causes of accidents and then to outline the necessary recommendations for flying personnel, determine the ways of developing various technical devices to prevent such collisions or to minimise the consequences if it is impossible to avoid them.

Based on foreign press reports

The most serious consequences result from collisions with power lines. The main causes of these accidents are the reduced attention of pilots due to fatigue when flying near the ground and poor knowledge of the terrain. Of course, in real combat the physical and psychological loads experienced by pilots will be much greater and, besides, they will often have to fly over unknown or poorly known enemy territory, which involves an increased risk of running into obstacles.

If wires are caught in the landing gear the helicopter may sharply bank or even overturn.

Usually, when running into wires a helicopter breaks them but the collision with powerful electric lines is much more dangerous as steel is used for power lines. The breaking loads of these wires may be tens of tons.

The consequences of collision with wires will differ according to whether they are hit by the blades of the main or the steering rotor and also according to the size of blades, what material they are made of, and the type of wires. The blades of medium and heavy helicopters with a take-off weight of about 5,000 kg cut wires up to 6 mm in diameter.

Partial destruction of blades upon impact results, as a rule, in a considerable shaking of the helicopter which may lead to loss of control.

Collision of helicopters with powerful electric lines is fraught with one more danger: the cutting or breaking of wires may result in a momentary short-circuit in the machine's fuselage. At the places of short-circuiting, craters usually appear. The greatest danger of these craters arises when they affect blade spars. The decision on the possibility of further use of such spars is taken proceeding from the tolerances for mechanical damage contained in the operating instructions. But after each flight these craters are carefully examined either visually or by means of optical instruments.

The main condition for preventing collisions of helicopters with wires is exact knowledge of where the wires are and reliable orientation in flight. Therefore, specialists advise pilots to study the flight chart carefully during preflight preparation and plot on it the lines not shown. One should bear in mind that in mountainous areas pylons are located at great distances from each other and at different horizontal levels. The difference in level between two adjacent pylons may be tens or even hundreds of metres.

At present helicopter manufacturers in various countries are engaged in developing methods aimed at preventing helicopters from colliding with obstacles, above all with power transmission lines. Provision of helicopters with special systems which warn the crew that the helicopter is approaching wires is considered very promising. According to foreign press reports, the deve-

lopment of such systems has already begun. But the carrying out of these projects will be not an easy task.

More tangible results have been achieved in investigations aimed at minimising the consequences of these accidents. These include development of various wire-cutting devices and also of blades that allow the wire to slide along them without being caught in its elements.

Research aimed at creating main and steering rotor blades with a rigid, sharp, high-inertia leading edge also show promise. Reports have appeared in the foreign military press on the development of a pyrotechnical cutter installed along the blade leading edge. Once the blade hits the obstacle, the detonator contacts close, the pyrotechnical charge is set off and the ejected jet of smelted copper destroys the obstacle. This cutter has been reported to cut through an aluminium cable 28 mm in diameter or a tree trunk with a diameter of about 150 mm. But this cutter is rather heavy. For example, a cutter of this type intended for use on helicopters with a take-off weight of up to 5,000 kg weighs more than 20 kg.

Various mechanical cutters designed to break wires using the kinetic energy of the flying helicopters have also undergone standard tests. Experts consider that the most effective among them is the cutter with the faces converging at an angle of 5-10°. It can cut wires of any diameter.

All types of cutters are provided with special guides along which the wires are directed onto the cutter faces. Besides, the guides are cover-

ed with an abrasive coating to rasp the wires sliding along them. The cutters are intended for mounting on the cabin glazing, on the fuselage sides, in front of the landing gear struts and on the cabin roof in front of the primary gearbox shaft.

Some specialists propose to use a circular mechanical knife as a cutter. The knife is set in rotation by a pyrotechnical charge which operates when the wires touch the cutter contacts.

To prevent the winding of wires around the swashplate and the main rotor hub, use is made of a saw-type rotary cutter which simultaneously serves to fair the hub and the swashplate.

Use of the "closed projection element" principle in designing helicopters allows the danger of their overturning when running into wires to be considerably reduced. According to this principle the nose part of the skid-type landing gear, for example, closes up on the fuselage, or the steering rotor blades are encased in a closed ring. A "fan-in-fin" steering rotor (i. e. a rotor provided with a high-speed fan), codenamed Fanastron, installed in the keel beam also meets the requirements of this design principle. A retractable landing gear is more useful in this respect than a fixed one.

Further development and introduction of methods for preventing collisions of helicopters with obstacles and for minimising the consequences of such collisions is an urgent problem of our days, and it is receiving much consideration by both helicopter manufacturers and flight safety experts.

COPYRIGHT: "Soviet Military Review", No 8, 1982

CSO: 1812/159

GROUND FORCES

BMD-1 AIRBORNE ASSAULT VEHICLE DESCRIBED

Moscow SOVIET MILITARY REVIEW in English No 8, Aug 82 pp 25-27

[Article by Eng Maj A. Beskurnikov under the heading "Weapons and Equipment":
"BMD-1 Airborne Assault Vehicle"]

[Text]

SOVIET designers have accumulated a wealth of experience in developing special fighting vehicles used in complicated conditions of a paratroop battle. Way back in March 1931 the first airborne motorised infantry detachment equipped with T-27 baby tanks carried under the fuselage of TB-3 aircraft was formed. Four years later a 5,700 strong parachute and air landing force with motor vehicles, armoured cars and T-37 light amphibious tanks was dropped near Brovary during the exercises of the forces of the Kiev Military District.

Test paratroops of T-37 and T-38 tanks on water surface testified to the reliability of armoured equipment used at the time.

Ample provision of the Soviet Airborne Forces with weapons and equipment enabled paratroopers to carry out combat missions successfully during the Great Patriotic War (1941-1945).

The paratropped ASU-57 and ASU-85 self-propelled guns which came into service in the postwar years considerably increased airborne subunits' fire power and manoeuvrability. The advent of the BMD-1 assault vehicles has opened new prospects for extensive mechanisation of airborne forces. The new

vehicle features high fire characteristics, good mobility and a reliable system of protection for crew and equipment.

The layout of the BMD-1 is a traditional one, with the crew accommodated in the front and the middle, and the engine compartment, in the rear.

The armament includes a smooth-bore cannon and coaxial machine gun mounted in the turret. Besides, two more machine guns are installed, one on each side in the front of the vehicle. To fight enemy armoured targets at great distances, the airborne assault vehicle is provided with a complex of wire-guided antitank missiles.

The cannon ammunition is kept on the ammunition stowage rack, which allows loading to be considerably speeded up and, consequently, a high rate of fire to be ensured. The same purpose is served by a special arrangement of the cartridge cases of the coaxial machine gun, which enables the gunner to fire until the entire ammunition establishment (2,000 cartridges) is spent, without distracting his attention for loading.

The combat potentialities of the turret armament are extended due to fire control equipment. Target search and aiming both by day and by night are performed with the aid of a day/night sighting periscope comprising a daylight optical and an ambient skylight electro-optic instruments. The ambient skylight observation and sighting instrument precludes detection of the vehicle in the dark which was possible before, when infrared vision devices were used. The required weapons aiming speeds are ensured by a semiconductor electric drive with a reserve mechanical drive to be used in case of damage to the former. The gun sighting range is up to 1,300 m.

The vehicle has an adequate life-support system. The case-and-link deflector bag fitted on the turret suspension is intended for collection of projectile sabots, spent cartridge cases and empty links of the coaxial machine gun cartridge belt.

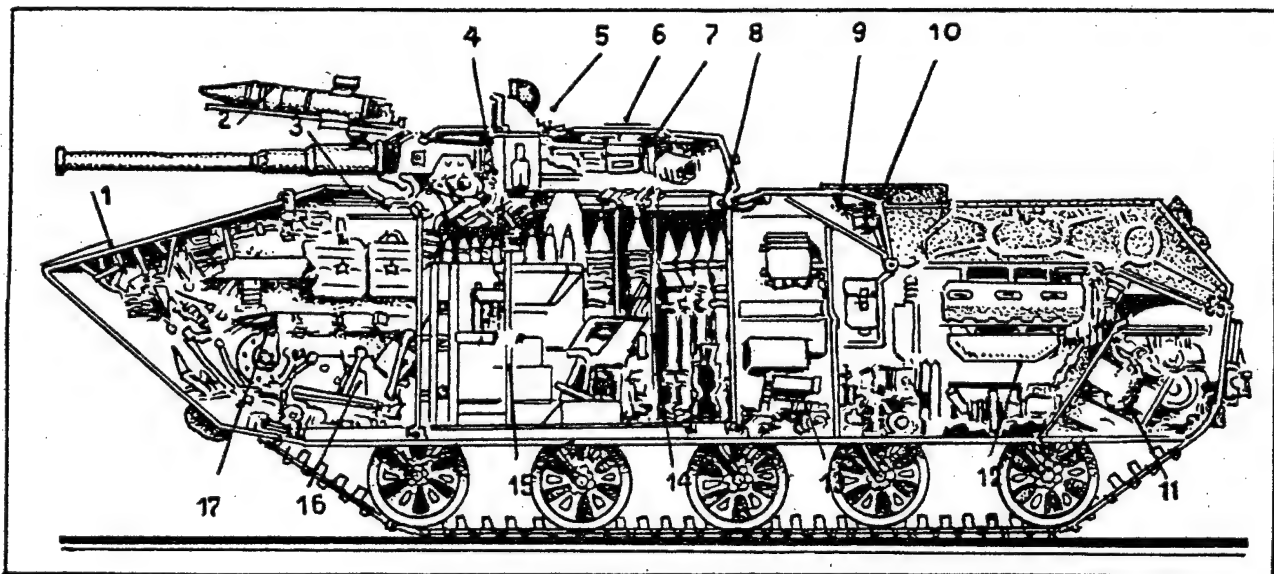
In conjunction with the powder gas exhaust system it reduces the carbon monoxide content in the fighting compartment, thereby permitting intensive firing.

The sighting devices are well adapted for use in different climatic conditions. Their drying and heating permits observation in frosty and rainy weather. A mechanical wiper makes it possible to distinguish terrain features in rain and snow.

The ATGM system enables the crew to fight various armoured targets successfully at a distance of 3,000 m.

The vehicle's fire power is enhanced by two PKT nose machine guns installed in the ball races in the nose of the vehicle. Two periscopic sights are used to aim them at the target. The nose machine guns are effective against light armoured targets, manpower and unprotected fire weapons.

AIRBORNE ASSAULT VEHICLE BMD-1: 1. antisurge vane; 2. ATGM; 3. driver's hatch; 4. gun elevating mechanism; 5. gun sight; 6. gunner's hatch; 7. observation device; 8. round of ammunition; 9. escape hatch; 10. sighting device; 11. hydrojet; 12. engine; 13. pneumatic spring; 14. gunner's seat; 15. case-and-link deflector bag; 16. driver's seat; 17. track tensioning mechanism



Paratroopers fire their small arms through firing ports in the vehicle's sides, and observe the battlefield through the sighting devices. The rational arrangement of the armament, crew and landing force armed with light machine guns, submachine guns and grenades increases fire effectiveness, creating a dense killing zone around the vehicle.

The vehicle's armour protects the crew reliably against small arms fire, and also against mine and shell splinters. This is largely due to rational slope of the armour plating and the low silhouette of the BMD-1. The design of the hull and turret provides maximum convenience for the crew, and ensures quick mounting and dismounting through three hatches in the front and one large hatch in the middle of the vehicle, behind the turret. The gunner's hatch is located in the turret roof. The personnel compartments are separated from the engine compartment by an airtight bulkhead.

The airtight hull allows the use of a collective system of crew protection against mass destruction weapons. The BMD-1 is also blast-resistant.

An independent suspension combining a hydraulic track tensioning and a ground clearance adjusting systems with pneumatic springs make it possible for the crew to vary (with the engine running) the vehicle's ground clearance from 100 to 450 mm, thereby increasing or decreasing the total height of the BMD-1. Cover when firing can be obtained by raising the hull and lower it after firing ceases. The variab-

le degree of track tensioning improves the vehicle's shock absorbing capacity and driving on rough terrain and roads.

The light tracks and adjustable suspension enable the crew to replace damaged track shoes without any great effort.

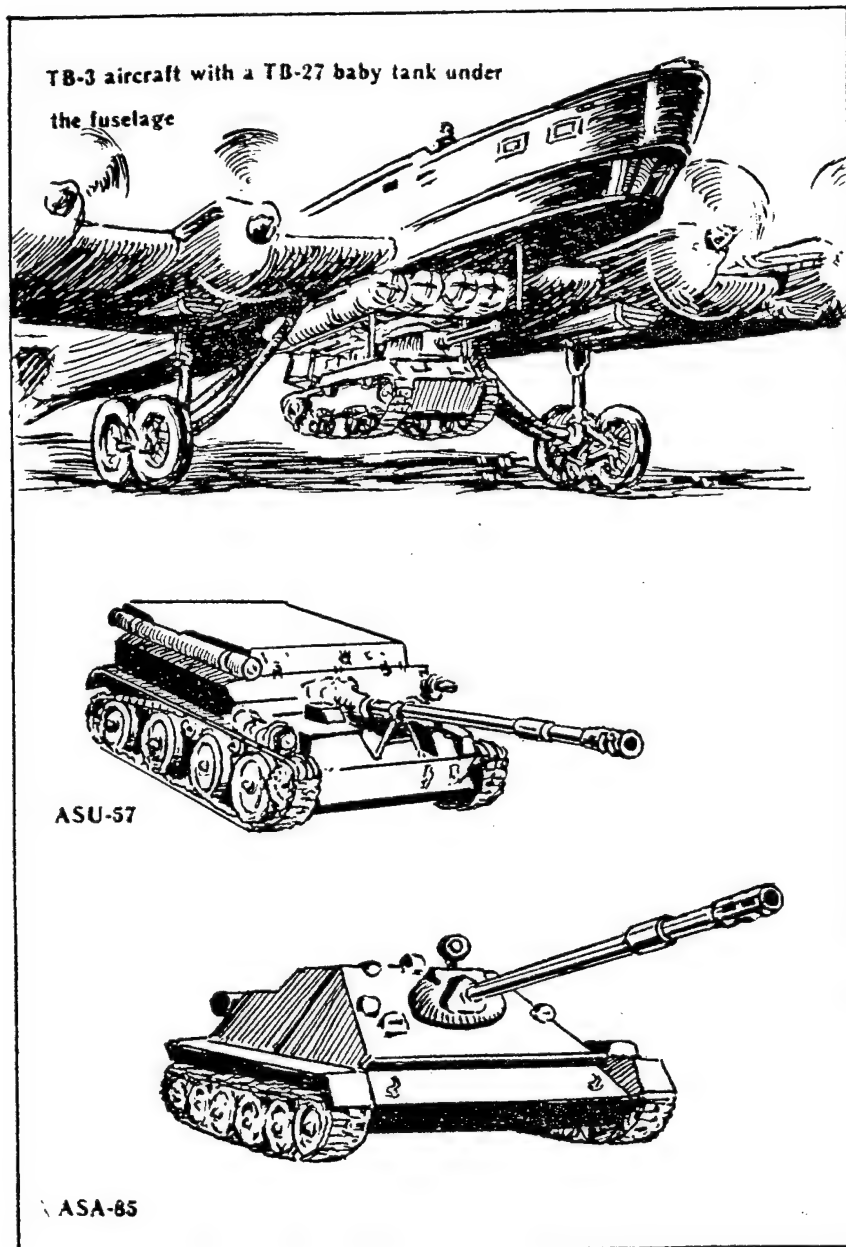
Owing to the powerful engine the vehicle's horsepower-to-weight ratio is 32 hp/t, which allows high speeds to be developed on land.

When acting in the enemy rear or on the flanks, performing marches or manoeuvres with manpower and equipment, water barriers have to be negotiated, often under enemy fire. Owing to the waterproof hull the BMD-1 features good buoyancy and stability on water. Using hydrojets, it can move on water without preliminary preparation. The hydrojets make it possible to negotiate shallows, to land and to control the vehicle afloat.

A number of contrivances, including cargo platforms, have been developed for parachuting the vehicle. Seconds after landing the BMD-1 gets rid of the slings and is ready to engage the enemy.

The fire-fighting system comprising transducers, control units and carbon dioxide cylinders ensures the vehicle's survivability on the battlefield in the event of fire caused by battle damage. The system is actuated automatically or by the crew's command.

The vehicle's small dimensions do not restrict the crew's movements. At the same time they present extensive possibilities for action in woods, inhabited localities and mountains.



COPYRIGHT: "Soviet Military Review", No 8, 1982

CSO: 1812/159

AIR DEFENSE FORCES

ARTICLES ON AIR DEFENSE FORCES DAY

Defending the Skies

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 11 Apr 82 p 3

[Article by Lt Gen A. Kulakov, first deputy chief of the Political Directorate of the Air Defense Forces: "Defending the Skies of the Motherland"]

[Text] Every year, on every second Sunday of April the men of our glorious Armed Forces, like all the Soviet people, celebrate Air Defense Forces Day.

At present, this holiday is being celebrated in a situation of a nationwide struggle to carry out the historic decisions of the 26th CPSU Congress and to properly fete the 60th anniversary of the formation of the USSR.

In showing concern for the well-being of the Soviet people and for maintaining the defense might of the Soviet state on a proper level, the Communist Party has made an enormous effort to lessen international tension.

A vivid demonstration of the concern to preserve peace in our world is the new proposals by the Soviet Union voiced by L. I. Brezhnev in a speech at the 17th Soviet Trade Union Congress of unilaterally declaring a moratorium on the deployment of medium-range nuclear weapons in the European USSR.

However, the imperialist forces, primarily the aggressive U.S. circles, have endeavored in every possible way to check the objective process of the renewal of peace. They have set out to further increase the arms race having turned anti-Sovietism and anticommunism into a tool for increasing it. The intrigues of imperialism aimed at undermining the socialist states are becoming evermore refined and perfidious.

The air defense personnel are perfectly aware of their responsible tasks and their duty to the motherland of securely defending the socialist fatherland, of being in constant combat readiness guaranteeing, as the USSR Constitution demands, an immediate rebuff of any aggressor, as well as sacredly defending and adding to the glorious combat traditions. And in the Air Defense Forces these traditions have profound roots, they were engendered and grew stronger in the fierce battles against the enemies of our motherland and in the peacetime days of combat training.

The birth of Air Defense Forces, their founding and development are linked with the Great October Socialist Revolution and the activities of V. I. Lenin.

Several days after the victory of Great October, V. I. Lenin visited the Putilov Plant where he spoke with the workers and set the task for them of accelerating the preparation of an armored train with antiaircraft guns to be sent to the front. The very next morning this armored train was on its way to the frontline. It provided substantial aid to the detachments of the Red Guard and revolutionary sailors in defeating the enemy around Gatchina.

Subsequently, the Putilov workers built an entire "armored artillery motor formation" which established the beginnings of the air defenses of the young Soviet republic.

In the chronicle of the Great Patriotic War there were many heroic pages inscribed by the men of the Air Defense Forces. Courage, self-possession, skill, and unshakable love for the motherland--this is what allowed the personnel of the Air Defense Forces to rout the enemy and achieve victory over it in the most difficult conditions.

In peacetime, the Air Defense Forces, in considering the experience of the Great Patriotic War, continued to improve and develop. This was required by the increased aggressiveness of the imperialist states and by the rapid development of air attack weapons in the capitalist countries. The greatest possible strengthening of the Soviet state's air defenses became a vital necessity.

Today the Air Defense Forces are forces on constant combat alert. They are always responsible for the motherland's security and for the inviolability of its air frontiers the length of which are more than 60,000 km.

We have something to defend and something to defend with. Due to the daily concern of the Communist Party and to the unstinting labor of the workers in socialist industry, the Air Defense Forces are outfitted with powerful diverse military equipment and weapons meeting the most modern demands.

The antiaircraft missile troops comprise the basis of air defense fire power. They are armed with antiaircraft missile complexes with great capabilities for hitting modern air attack weapons at all ranges of altitudes and speeds, regardless of the weather conditions and the time of day. The air defense aviation is equipped with supersonic, all-weather fighter interceptors with powerful missile weapons capable of intercepting and destroying any air attack weapons.

The radiotechnical [radar] troops are equipped with radars capable of detecting an air enemy at great ranges and at all altitudes, to determine its precise coordinates and promptly provide radar information to the antiaircraft missile forces and the fighter aviation. The Air Defense Forces widely employ automated control systems and high-speed communications. All of this provides an opportunity for the commanders and staffs in a short period of time to assess the situation, to take optimum decisions for combat and most fully utilize the capabilities of the weapons and equipment.

The main force of the Air Defense Forces is comprised of the men who are ideologically tempered, loyal to the party and the people and in full control of the weapons entrusted to them. The commanders, the political workers, the party and Komsomol organizations mobilize the personnel to achieve new successes in combat and political training, in strengthening organization and discipline and in further increasing the combat readiness of the subunits and units. The socialist competition which has developed widely in the troops in honor of the 60th anniversary of the formation of the USSR under the motto: "Secure Defense for the Peaceful Labor of the Soviet People!" is aimed at achieving high indicators in training and service.

The remarkable patriotic deeds of the men in the outstanding antiaircraft missile regiment under the command of Col V. Parshikov are a vivid example of a profound understanding of one's military duty to the motherland. This unit has glorious combat traditions and to its score are thousands of kilometers of frontline roads and 65 shot-down enemy aircraft. Many men from the regiment have received combat orders and medals. In taking over the baton from the older generation, the personnel is successfully carrying out the plans for military and political training and the socialist obligations.

Our officers are loyal to their military and patriotic duty. Many of them have received high governmental decorations for successes in training, for mastering the new military equipment and for exemplary service.

The communists and Komsomol members are the unifying force of the army collectives. These comprise 90 percent of the total number of air defense troops. By their word and personal example, they lead all the personnel in the struggle for high political vigilance and combat readiness.

The air defense personnel, like all the personnel of the Soviet Armed Forces, in a single formation with the men from the fraternal armies of the socialist commonwealth, will in the future vigilantly stand on guard for the peaceful labor of their people and the victories of socialism. They are always on the alert and are always ready to defend the skies of the motherland.

Transcaucasian Air Defense Chief Interview

Tbilisi ZARYA VOSTOKA in Russian 11 Apr 82 p 3

[Interview with Maj Gen Art V. P. Sinitsyn, air defense commander of the Red Banner Transcaucasian Military District: "High Combat Capability--A Law of Service"]

[Text] On the eve of Air Defense Forces Day, a correspondent of Gruzinform [Georgian Information Service] met with the air defense commander of the Red Banner Transcaucasian Military District, Maj Gen Art V. P. Sinitsyn, and asked him to answer several questions.

[Question] Comrade major general, please tell us about the campaign record of the Air Defense Forces.

[Answer] The birth of the air defense forces is linked to the Great October Socialist Revolution and to the activities of V. I. Lenin. In 1917, upon Lenin's instructions, the first air defense subunit was organized for the young Soviet republic, and in the summer of 1918, the first antiaircraft railroad battery. Following units of the 11th Army, in 1920, the battery arrived in Baku, making a beginning to the creation of air defense forces in the Soviet Transcaucasus.

Vivid heroic pages were inscribed in the history of the Air Defense Forces during the years of the Great Patriotic War. The air defense units engaged the Nazi aviation from the very first moments of the treacherous Nazi attack on our nation.

The military feat of the defenders of the skies was highly praised by the motherland. Three air defense formations and 26 units became guards ones. More than 80,000 soldiers, sergeants, officers and generals were decorated with high governmental awards. Some 92 of them received the title of Hero of the Soviet Union.

The heroic defense of the Caucasus has gone down in the glorious chronicle of the Great Patriotic War as one of the vivid pages. The Soviet military formed a wall at Malgobek and Mozdok and over the passes of the Greater Caucasian Range.

The enemy did not pass through. The Nazi hordes also bogged down in the Tuapse sector where they had hoped to reach the Black Sea Coast. Here the defenses were held by the courageous men from the legendary 18th Army. The units of the Transcaucasian Air Defense Zone securely covered the ground forces and major industrial centers. The defenders of the southern skies successfully combated the enemy reconnaissance aircraft and bombers which endeavored to break through to Tbilisi and Baku, Batumi and Poti, Sukhumi and Ordzhonikidze.

[Question] What qualitative changes have occurred in the Air Defense Forces over the postwar period and how are the men of the 1980's continuing the glorious military traditions of the combat veterans?

[Answer] The current generation of the defenders of the motherland's skies are worthily continuing the cause of the frontline heroes. The men have adopted all the best from combat experience. In peacetime there is also room for a feat in the heroic profession of an air defense soldier. This has been convincingly shown by the men from the antiaircraft missile battalion headed by Maj M. Voronin which shot down an American reconnaissance aircraft.

At the 26th CPSU Congress, the General Secretary of the CPSU Central Committee L. I. Brezhnev commented: "At present, in the ranks of the motherland's defenders are already the sons and grandsons of the heroes of the Great Patriotic War. They have not undergone the severe testing which befell the lot of the fathers and grandfathers. But they are loyal to the heroic traditions of our army and people."

The Communist Party and its Central Committee, in constantly being concerned for the USSR Armed Forces, has devoted much attention also to the Air Defense

Forces, to their technical equipping and to improving the organizational structure. At present, they are armed with the most advanced, powerful and effective military equipment and weapons embodying the most recent achievements of Soviet science and technology.

The antiaircraft missile forces possess great firepower and great accuracy in hitting air targets. They are armed with various types of antiaircraft missile complexes. The air defense radiotechnical subunits in the district are also successfully carrying out the missions confronting them and they are armed with modern radars which are capable of detecting the air attack means of the probable enemy hundreds of kilometers away. The air defense units and subunits are also equipped with high-speed and reliable communications and automated control systems.

[Question] With what results are the district's air defense troops greeting their professional holiday, and what goals in increasing combat skills have they set for themselves during the year of the 60th anniversary of the formation of the USSR?

[Answer] As in all the USSR Armed Forces, in the air defense units and subunits of the Transcaucasian Military District, a socialist competition has developed widely under the motto "Secure Defense for the Peaceful Labor of the Soviet People!"

The personnel in the air defense forces of our border district are perfectly aware that only high vigilance, honed skill and constant combat readiness guarantee secure defense for the peaceful creative labor of the Soviet people.

The communists and Komsomol members are the unifying force of the army collectives and they make up 90 percent of the personnel. They have been the pioneers of the remarkable undertakings.

Party political work in the units is aimed at completely explaining to the men the requirements of the 26th CPSU Congress for the armed defenders of the Soviet fatherland as well as the role and significance of military service in communist construction.

The air defense personnel assure the Communist Party and the Soviet government that in the future they will carry out their constitutional duty in an exemplary manner and securely defend the socialist fatherland. High and constant combat readiness are the law of their service.

Air Defense Forces Deputy Interview

Minsk SOVETSKAYA BELORUSSIYA in Russian 11 Apr 82 p 3

[Interview with Col Gen Art A. G. Smirnov, deputy commander-in-chief of the Air Defense Forces by Stepan Fedoseyev, APN [Novosti Press Agency] correspondent: "Defending the Skies of the Motherland"]

[Text] On the eve of the traditional holiday of the air defense personnel, the APN correspondent Stepan Fedoseyev had an interview with Col Gen Art A. G. Smirnov, deputy commander-in-chief of the Air Defense Forces.

[Question] Aleksey Grigor'yevich [Smirnov], even a cursory analysis of the evolution of U.S. strategic concepts in the 1950's through the 1980's indicates that they all have a clearly expressed aggressive nature and basically contain the idea of a nuclear war against the USSR and the other socialist countries. What can be said in this regard on the deployment of aerospace attack weapons by the United States and its allies?

[Answer] Actually immediately after the end of World War II, when the Soviet people were totally involved in rebuilding the war-devastated national economy, the U.S. and English ruling circles began preparations for an atomic war against their former Ally in the anti-Hitler Coalition. At the beginning of the 1950's, there appeared the strategy of "massive retaliation" which envisaged the conduct of an universal atomic war against our nation. As the Soviet defense might increased, the United States proposed and altered various strategic concepts. In the 1960's there appeared the "flexible response strategy. After this came "realistic intimidation" (the beginning of the 1970's).

The Reagan Administration which began to elaborate a so-called "new military strategy" a strategy of "direct hostility" against the USSR on global and regional scales, is wagering chiefly on preparations for an extended nuclear war. In accord with this, the policy has been set of rapidly increasing the strategic nuclear missile air attack weapons designed for first-strike capability.

The U.S. strategic and offensive forces even now possess 10,000 nuclear warheads. These include 1,053 launchers of intercontinental ballistic missiles, 648 launchers of ballistic missiles, submarines and over 570 heavy bombers.

One need not be a military specialist to realize that all of this sharply complicates the international situation and poses a serious threat of air attack using weapons of mass destruction.

[Question] It is no secret that the planned development of all the services and branches of troops of the USSR Armed Forces is being carried out for securely defending the Soviet nation and promptly rebuffing the aggressor. What is the role here of the Air Defense Forces? How would you describe their present state?

[Answer] The Air Defense Forces have been entrusted with providing defense against air strikes for the administrative-political centers, industrial regions, groupings of armed forces and other important installations in the nation. They should be the first to detect and encounter the enemy. This is a complex and responsible task.

Our air defenses have been organized considering the capabilities of the means of air attack in the most developed capitalist nations. Particular attention has been paid to developing new types of weapons and equipment. The air defense configurational system has been improved so as to successively effect the enemy, increasing the efforts in keeping with the depth of its probable penetration.

Substantial organizational changes have also occurred. The Air Defense Forces have become an independent service in the USSR Armed Forces. At present, they

are armed with everything necessary for successfully carrying out their missions of promptly detecting an air attack, destroying the existing and prospective targets at various altitudes, in any weather, with electronic countermeasures and at the distant approaches to the defended installations.

A characteristic feature of the Air Defense Forces is the extensive use of radioelectronic equipment and automated systems in all elements of control. This significantly shortens the time for readying the weapons for combat and increases the effectiveness of their use.

[Question] How does the personnel handle such complex equipment? What is your opinion about their training?

[Answer] Due to universal secondary education in the nation, highly educated youth are arriving in the army. Many young men have mastered technical specialties and have basic military training. In the units and subunits the entire system of theoretical and practical exercises is so organized that in a maximum short period of time they provide the men with the necessary knowledge and experience. The results of the last training year and the first months of the present one make it possible to conclude that the personnel is steadily achieving ever-new successes in military and political training. Suffice it to say that a majority of the antiaircraft missile, aviation and radiotechnical units and subunits are carrying out the set missions with good and excellent evaluations.

The "Zapad-81" [West-81] Exercises convincingly demonstrated that the personnel of the Air Defense Forces are successfully mastering the complex equipment assigned to them and are able to fully utilize its capabilities and carry out the missions under any conditions.

The National Air Defense Forces, as is known, are constantly standing alert duty. They are ready at any moment to rebuff the aggressor.

[Question] Please tell us how ties are developing between the Soviet Air Defense Forces and the air defense personnel in the fraternal socialist nations.

[Answer] Cooperation is developing successfully. There are joint measures and the exchange of experience in combat training, the elaboration and introduction into practice of advanced training and indoctrinational methods as well as joint exercises where the skill of the commanders and staffs, the missile troops, pilots and radar operators is honed. Cooperation is growing stronger also in solving the pending problems and friendship and political unity are developing between the personnel of our states.

In conclusion I would like to recall that L. I. Brezhnev, in speaking at the 17th Trade Union Congress and in Tashkent raised a range of important peace proposals and initiatives. At the same time he emphasized: "The militaristic course and aggressive policy of the NATO bloc headed by the United States force us to adopt measures to keep national defense capability on a proper level. This is a harsh necessity of today's world...."

Air Defense Political Chief on Goals

Vilnius SOVETSKAYA LITVA in Russian 10 Apr 82 p 2

[Article by Maj Gen Avn V. Mikhaylov, deputy chief of the Political Directorate of the Air Defense Forces: "Guarding the Peaceful Skies"]

[Text] The life of the Soviet people and the men of the glorious Armed Forces is filled with a particular political and labor upsurge during the second year of the 11th Five-Year Plan, the year of the 60th anniversary of the formation of the USSR. Our people are celebrating this glorious jubilee with significant patriotic deeds, embodying in life the historic decisions of the 26th Party Congress and the instructions of Comrade L. I. Brezhnev given by him at the November (1981) Plenum of the CPSU Central Committee and in a speech at the 17th Soviet Trade Union Congress.

The men of the valorous Armed Forces are also preparing to worthily celebrate the 60th anniversary. By their unstinting military service they are continuing and adding to the glory of the home army.

The air defense troops have inscribed vivid pages in the heroic chronicle of the Soviet Armed Forces created by the will of the Leninist party for defending the socialist fatherland. As recognition for their great accomplishments during the years of the Great Patriotic War and in carrying out particularly important tasks in peacetime, an annual holiday has been instituted, National Air Defense Forces Day, which is now celebrated on 11 April.

The history of air defense for the Soviet state has rich and glorious traditions. V. I. Lenin stood at the sources of its first subunits. Upon his personal instructions, during the days of Great October at the Putilov Plant in Petrograd, a steel antiaircraft battalion was organized and outfitted and this soon thereafter in battles near Pskov opened up the combat score of the anti-aircraft artillery troops.

During the years of the Civil War and foreign intervention, the air defense troops successfully carried out the combat missions, they courageously defended Petrograd, Moscow, Baku, Astrakhan' and other important centers of the nation against enemy air strikes and, if the situation so required, bravely fought against the ground enemy.

During the years of peacetime construction, the party and government carried out extensive work to strengthen the defense capability of the USSR, to develop the air defense resources and prepare them for future combat. By the start of the Great Patriotic War, a statewide air defense system had been created. Our troops possessed everything necessary for successfully fighting against the air enemy.

The Air Defense Forces made a worthy contribution to the victory over the Nazi invaders and Japanese militarists. They unstintingly and courageously defended the administrative-political centers and industrial regions of the nation, the lines of communications of the fronts and the troop groupings on the battlefield

against air attack. The air defense formations and units during the war years destroyed more than 7,300 enemy aircraft.

In the battles against the enemy, the air defense personnel demonstrated miracles of courage and heroism. The people will never forget the great feat of the fighter pilot V. Talalikhin who carried out a nighttime ramming. The famous pilot V. Kovzan rammed enemy aircraft four times. The antiaircraft artillery gunners in the battery under the command of Lt G. Volnyanskiy and the political leader M. Sizov immortalized their names by steadfastness and valor. In a fierce and unequal battle on the approaches to Tula, they stood to the death, repelling attacks by Nazi tanks.

The party and government had high praise for the military feat and combat skill of the air defense troops. Three air defense formations and 26 units were awarded the title of guards while many corps, divisions and regiments received honorary names and USSR orders. More than 80,000 soldiers, sergeants, officers and generals of the Air Defense Forces received orders and medals. Some 92 men became Heroes of the Soviet Union while the fighter pilot, Capt A. Karpov, received this title twice. Some 34 hero soldiers have been inscribed on the rolls of the military units in perpetuity.

In the postwar period, the Communist Party has continued to give unflagging attention to strengthening the combat might of the Army and Navy. Significant organizational and qualitative changes have occurred in the Air Defense Forces. They have become an independent Armed Service.

Today's Air Defense Forces are armed with complex and diverse weapons including antiaircraft missile complexes with high resistance to jamming and effectiveness in hitting airborne targets in a broad range of altitudes as well as first-rate air interception equipment and radar systems. Presently characteristic of the troops is a high degree of automating combat control based on modern automated control systems and high-speed communications.

The commanders and political workers of the Air Defense Forces are able indoctrinators of the men. Along with the party organizations, they are constantly improving party political work in the units and subunits and are ensuring the vanguard role of the communists and Komsomol members in combat training and military discipline. At present among our men more than 90 percent are communists and Komsomol members, over 70 percent are specialists with a high skill class and a third of them is outstanding men in military and political training.

The sons of all the nations and nationalities of the USSR are serving shoulder to shoulder in the combat formation of the Air Defense Forces. With great interest and approbation they welcomed the Decree of the CPSU Central Committee "On the 60th Anniversary of the Formation of the USSR." In the course of the socialist competition to properly celebrate the significant jubilee under the motto "Secure Defense for the Peaceful Labor of the Soviet People," the personnel have demonstrated a highly aware attitude toward the cause.

The great successes in combat training and the competition are ensured by the broadly developed party political work among the men. At present, everywhere

in the units and subunits a thorough study is underway of the documents of the 26th Party Congress and the decree of the CPSU Central Committee on the occasion of the 60th anniversary of the formation of the USSR.

The air defense troops have accepted as their combat task the instructions of Comrade L. I. Brezhnev voiced at the 17th Soviet Trade Union Congress that the militaristic course and aggressive policy of the NATO bloc headed by the United States are forcing us to adopt measures to maintain national defense capability on the proper level. The defenders of the air frontiers are perfectly aware that as long as imperialism exists our powder must be kept dry.

The loyal sons of the Soviet people, the air defense personnel, like all the personnel of the Armed Forces, are always ready at the first call of the party to carry out their patriotic and international duty.

Radar Troop Training

Riga SOVETSKAYA LATVIYA in Russian 11 Apr 82 p 3

[Article by SOVETSKAYA LATVIYA special correspondent A. Grigoryan from the Red Banner Baltic Military District: "Guardians of the Skies"]

[Text] The silence of the quiet spring morning was broken by the sharp, continuous wail of the siren. The signal literally released a tightly wound spring. Each movement of the men from the radiotechnical [radar] subunit of the Air Defense Forces was now subordinate to a solid rhythm, with everything calculated down to the second, and to one task of detecting the "violation" of the air frontiers and to determine its coordinates with sniper accuracy. Combat work had started, as Officer S. Kuz'min put it prosaically.

We hurried to the command post. The duty shift, having beaten the rigid standards, was involved in an intense search. The room was submerged in semi-darkness. Until my eyes became accustomed to it I could only guess how the men were concentrating.

The senior operator Andrey Vishnyakov was bent over the plan position indicator. He is a class specialist, no novice in his work but it was not easy for him. The situation was very complex and in addition, as always, the burden of responsibility was great. The operator is the main figure at the radar station. He should be the first to glimpse the "enemy." And the sooner the greater the guarantee that the target would be hit.

...The plan position indicator best mirrors the intensive life of the skies which remains invisible to us. All of it there, on the orange convex disc, is sketched out by the scan beam. There are so many tracks of air objects that one is dazzled. Just try to guess where the target is. This is an impossible mystery for the uninitiated.

"Target!" reported the operator.

The first part of the task had been carried out. The "enemy" had been spotted among the multiplicity of airborne objects picked up by the sensitive radar

antennas. Then it became even more complicated as it was essential to act so that data would be obtained almost instantaneously on the direction of its movement and altitude....

The "enemy," having felt that it was in the radar zone of visibility, tried to cover its tracks. It had a rather large arsenal of means available. Everything was put into use including maneuvering in speed, a sudden change in altitude and radio-jamming....

"Zero one...azimuth...range...altitude....," reported Vishnyakov.

A continuous stream of figures. They were read off by the operator and altitude reader, while the plotting board operator, Pvt Vasiliy Soyma, plotted the symbols on an enormous underlit plotting board. The actual geography was designated on it. Now the command had reliable data. They would be transmitted to the subunits of antiaircraft troops armed with missiles and to the guidance centers for the all-weather fighter interceptors. The "enemy" detected by radar reconnaissance would be destroyed.

Neither the operators, the communications troops or the officers of the radio-technical subunit could see the powerful missile moving rapidly through the skies, but each person here was confident that his work was a necessary portion of the efforts leading to the achieving of the overall goal. Air defense involves collective-action troops. Each man performs his duties but only the total of will, ability and skills of each man gives rise to the necessary unity and teamwork of actions. I liked the formula of the squad commander Sgt Romas Mikutskas who said that service had developed in him and his comrades an obligation and an ability to carry out what had been started to the end. Under conditions where instants acquire crucial significance, later on there is nothing that can be corrected.

Modern air combat is quick and dynamic. It is very difficult to control it. Here equipment comes to our aid. This is complex and very demanding.

"In the sense," Officer A. Krinitskiy explained to me, "that if you do not reach the level set by the designers, you cannot expect success. Hence the interest and desire to achieve the perfection of the systems developed by the scientists, engineers and workers and provided by the Soviet people for their military."

A talk with him helped to explain an externally simple truth that knowledge is only effective when it is not only available to you but also to your comrades who are united by a common goal. The recent graduate from the Kiev Higher Air Defense Radioengineer School, Aleksandr Krinitskiy, generously shares his knowledge and studies himself.

Here there is simply no other level of responsibility. There could not be. How can one forget that in the world peace has enough enemies and that overseas voices spreading mythical absurdities about a Soviet military threat are becoming ever-louder. In hiding behind this flagrant lie, the aggressive imperialist circles are hatching the idea of achieving military superiority over our nation and are sparing neither force nor money in accelerating the development

of evermore refined military equipment and aggressive weapons. It is essential to be ready to properly rebuff any intrigues by the enemies of peace and socialism.

"We are serving here," said Pvt Bakhoder Isayev, "to securely defend our air frontiers. And each of us, regardless of from what corner of the nation he has come, is being counted on by all our close friends and all the Soviet people who know well the price of peace. My father, a hereditary cotton grower from Uzbekistan, was moved by the new peace initiatives of the USSR formulated by Comrade L. I. Brezhnev at ceremonies in Tashkent. From his own experience my father knew what war meant and for this reason ordered me and my comrades to keep our powder dry.

The parents of the Uzbek Bakhoder Isayev, the Azerbaijani Nazim Aliyev, the Ukrainian Vasiliy Soyma, the Lithuanian Romas Mikutskas and other fellows who were in the air defense subunit could rest assured. Their sons are loyal to their duty and oath. The results of the socialist competition in honor of the 60th anniversary of the USSR confirmed the high level of combat and political training for all the personnel.

Such qualities are shaped in the process of daily labor and intense tours of duty in front of the radar and plotting board indicators and at command posts. The competition helps mobilize the physical and spiritual reserves and raises the spirits of the men. During the jubilee year of the Soviet nation, the rivalry among the men has noteworthy traits. The main ones are mutual aid and a helping hand.

Private Yan Vilyums from Riga, prior to induction into the army, had behind him his secondary schooling and a technical school where he received the skill of a cutter of outer menswear. At first, it was difficult for him in the army. He could not get the work with the delicate instruments. But character and help from comrades aided in overcoming the psychological barrier. Now Yan is a class specialist, an operator and one of the best mentors.

Probably each of the men in the radiotechnical subunit had to arrive at this truth. While it is simple, it may not immediately reach your heart and become a basic principle of life in a mere hour. But the burden of responsibility is great. It rests on the shoulders of the fellows who have been born and grew up after the war and did not undergo the testing which befell their fathers and grandfathers. However, there is an invisible but clearly-felt tie between the generations. The baton of courage and patriotism is in the dependable hands of the new shift.

...The sun was about to set when I left the subunit. The delicate aroma of pine could be made out in the warm air and the turquoise of the clear sky was darkening. As if mixing the blue of the sky, the parabolas of the radar antennas circled smoothly. Combat work was continuing. Unnoticed by many, but still so essential for all of us, as is a peaceful sky.

Historical Background of Air Defense Forces

Baku VYSHKA in Russian 10 Apr 82 p 1

[Unattributed article: "Always in Combat Readiness"]

[Text] The air defense personnel have inscribed vivid pages in the historical chronicle of the Soviet Armed Forces. As recognition of their great accomplishments during the years of the Great Patriotic War and in carrying out particularly important tasks in defending the peaceful skies of the fatherland, a holiday has been instituted, Air Defense Forces Day, which is celebrated each year on the second Sunday of April.

The history of the Soviet state's air defenses has rich traditions. In November 1917, when the forces of counterrevolution were advancing on Petrograd, V. I. Lenin visited the Putilov Plant and asked the workers to speed up the building of an armored train with antiaircraft guns. This marked the beginning to the creation of the first air defense subunit of the Soviet Republic. By April 1918, the Red Army already had around 200 antiaircraft artillery batteries and 12 fighter air detachments.

For combat services in engagements of the Civil War, two antiaircraft batteries and a fighter air division were awarded the honorary revolutionary Red Banners of the VTsIK [All-Russian Central Executive Committee] while hundreds of men were awarded governmental decorations. Some 16 of the most courageous pilots twice received the highest award of those times, the Order of the Red Banner.

By 22 June 1941, the Air Defense Forces included 182,000 men, 3,659 medium- and small-caliber antiaircraft guns, 650 antiaircraft machine guns, 1,500 searchlights and other military equipment. The 40 air fighter regiments assigned from the Air Forces for air defense of national installations included around 1,500 aircraft.

The feat of the Air Defense Forces has been inscribed in gold letters in the history of the Great Patriotic War. They protected Moscow and Leningrad, Baku Gor'kiy and Kuybyshev and a number of major industrial economic centers against destruction by Nazi aviation. They provided cover against air strikes for the rail and water lines of communications over which the front was supplied with weapons, equipment and food. During the war years Nazi aviation made more than 20,000 raids against rail installations but only in 3,950 instances did the enemy succeed in disrupting traffic for any time.

The glorious feats of the air defense soldiers and commanders during the years of the Great Patriotic War were highly regarded by the motherland. More than 80,000 soldiers, sergeants, officers and generals of the National Air Defense Forces received orders and medals, 92 persons received the title of Hero of the Soviet Union and 34 of them were entered on the rolls of the troop units in perpetuity. Some 3 air defense formations and 26 units became guards and 11 received honorary names.

Hundreds of our fellow countrymen from Azerbaijan during the war years vigilantly defended our towns and villages and waged a heroic struggle at Moscow and

Leningrad, Stalingrad, Kursk and the cities of the Caucasus. Many of them were awarded high governmental decorations. At present, as war and labor veterans, they, sparing no effort, set the example in carrying out all the plans of the home Communist Party for the sake of the flourishing of the Soviet fatherland.

The Air Defense Forces in their very purpose are troops on constant combat readiness. The motherland has equipped them with the most modern weapons and equipment. The sons of all the Soviet nations and nationalities serve shoulder to shoulder in a combat formation at present as they did during the years of the Great Patriotic War. With great approval they received the Decree of the CPSU Central Committee "On the 60th Anniversary of the Formation of the USSR." In the course of the socialist competition to properly celebrate the significant jubilee under the motto "Secure Defense for the Peaceful Labor of the Soviet People," the men of the Air Defense Forces, in adding to the glorious traditions, are steadily mastering the equipment and weapons entrusted to them and are achieving ever-greater heights in their combat skills.

Congratulations, dear servicemen!

Air Defense Aviation Commander Interview

Moscow KOMSOMOL'SKAYA PRAVDA in Russian 11 Apr 82 p 1

[Interview with Col Gen N. I. Moskvitelev, commander of aviation of the Air Defense Forces, by Vl. Kiselev: "Clear Skies"]

[Text] Some time ago at the Le Bourget Air Show held in Paris, the following event took place. A Soviet pilot general was offered to test a new trainer which could be used for pilot training. The equipment made it possible to simulate any very complex air situation. The general had just got his bearings when the "aircraft" went into a spin. A roll started with one loop, a second and a third.... The general leveled out the aircraft and then there was a new dirty trick. What was this, a test in advanced aerobatics? But the examiner had clearly come acropper.

When the general had safely "landed," excited specialists hurried up. One of them in excitement raised his thumb--that is how you should "fly it"!

[Question] Our meeting with the commander of aviation of the Air Defense Forces, Col Gen N. I. Moskvitelev, started with recalling this episode.

[Answer] Any skilled pilot could easily have done the same. Particularly a military pilot. School, daily service prepare him for this. A military pilot must perform higher aerobatics under conditions as close as possible to actual combat.

Modern aviation equipment makes it possible to take to the skies during the day and at night, in thunder and snowstorms. You can imagine what demands are made on the flight training of a person controlling such an aircraft, and how he should master it in order to successfully carry out air combat. Certainly a victory ultimately depends upon how you have mastered the equipment, upon the ability to get out of it everything it is capable of and upon its intelligent use in combat.

[Question] Nikolay Ivanovich [Moskvitelev], but it is a question not merely of a pilot but also of a commander.

[Answer] Realize that these concepts are interrelated. The higher you rise up the service ladder the greater the responsibility resting on your shoulders. Initially you go into battle yourself, then you lead a flight, a squadron, a regiment.... You must grow and improve not only as a strategist and tactician but also as a pilot. Independently of rank and position, a pilot always remains a pilot.

In the Soviet Armed Forces they follow the rule: "Do as I do." I have followed this all my life. I have learned this from my senior comrades and commanders such as the famous aces: thrice Hero of the Soviet Union A. I. Pokryshkin, twice Heroes A. I. Koldunov and Ye. Ya. Savitskiy and others. And I have taught this to subordinates.

I would not be original in saying that for a pilot to fly means for him to live. This is actually the case. When for whatever reasons a pilot stops flying this is very difficult for him to endure.

[Question] Every little boy dreams about the skies and altitude. Only not all remain faithful to this inspiring dream. This year the competition for the flight schools will be traditionally high. Nikolay Ivanovich, what would you advise the young men who have decided to link their fate with air defense aviation.

[Answer] I would advise them to remember that a pilot is not just a profession. It is a love. If you feel that you can get by without flying, then do so.

A modern military pilot is an intelligent, inquisitive, physically strong and conditioned man. You must prepare yourself "as pilots." There are excellent opportunities to study air sports in the DOSAAF air clubs. There you can test yourself and your dream. Without flying at least on a glider, one probably should not speak about dedication to flying.

I would admonish a future pilot to strengthen his character and will. In flight anything can happen when the motor and wings are powerless to keep the aircraft in the air and the pilot's will comes to aid. I could give many examples of this from the legendary days of the Great Patriotic War. I could also name modern aces. Col Ivan Yefimovich Zhukov was awarded the high title of Hero of the Soviet Union. During a flight, in getting into a very difficult situation, the pilot showed courage and the greatest strength of will. There was no hope of saving the aircraft and the colonel had even been ordered to catapult. In the army an order is an inexorable law for a subordinate. But there are situations when a person should take a decision independently. Zhukov performed what seemingly was impossible. He landed the aircraft.

[Question] Nikolay Ivanovich, in our talk you have made a distinction between the "air defense pilot." How does he, strictly speaking, differ from an "ordinary" military pilot?

[Answer] The Air Defense Forces are troops on constant combat readiness and this also determines the pace and specific features of our service. It is essential to be ready to stand alert duty and upon the first signal to rush towards the danger.

The all-weather fighter interceptors are missile-carrying air interception complexes. Together with the automated control equipment they make it possible to repel the air enemy at the distant approaches to the defended installations. For this reason, an air defense pilot, having straddled this fantastic equipment, should be ready to operate at an enormous distance away from the airfield, in any weather, to operate, if need be, independently, that is, without any suggestion from the ground and independently take decisions. It is essential to fly at maximum low altitudes, merging with the terrain, as well as in the stratosphere above the clouds, and at very great speeds. It is essential to instantly assess a situation and take the only correct decision.

[Question] The history of the Air Defense Forces goes back to the October days of 1917 and is inseparably linked with the name of V. I. Lenin. How are the traditions born in the battles of the Civil and Great Patriotic wars developing?

[Answer] I was not involved in the engagements of the Great Patriotic War. But I lived through the war and recall how crowds of people would gather around the loudspeakers, I recall the faces of people who heard about the atrocities of the Nazi aggressors and Kiev, Sevastopol' and Odessa burning from bombs....

Regardless of temporary enemy superiority in the air, our, as was then said, "Red Star falcons" entered the unequal engagements. And they fought desperately.

It would be hard to find words to express the exaltation in the courage shown by the Soviet soldiers and officers. If need be they turned from antiaircraft gunners into tank fighters and lowered the barrels of their guns and set enemy tanks afire.

The heroic baton is in dependable hands. "The frontier is locked"--this expression is frequently used speaking about the Border Troops. But this also applies to the air defense personnel. Certainly we defend the air frontiers.

In the broadest range of altitudes, under any weather conditions and at any time of the day our troops are capable of finding and destroying air targets.

At present, the Air Defense Forces are armed with the most modern military equipment. The Communist Party, the Soviet government and all the people are constantly concerned with this. But our main force is the people. This is the glory of the troops.

I am frequently in the troop subunits. I see 20-year-old soldiers and sergeants, young warrant officers ["praporshchik"] and officers and I watch them control the complex equipment and how steadfastly they endure all the hardships and problems of military service. I am proud of these men. I want to say great thanks for their difficult military service.

LOGISTICAL SERVICES AND SPECIAL TROOPS

ENGINEER SUPPORT FOR MOTORIZED RIFLE BATTALION DESCRIBED

Moscow SOVIET MILITARY REVIEW in English No 8, Aug 82 pp 20-21

[Article by Eng Capt V. Sobolev: "Engineer Support of a Mts Inf Bn on the March"]

[Text]

Engineer support of a motorised infantry battalion on the march includes a whole complex of different measures. **The most important of these are engineer reconnaissance of traffic routes; water obstacle crossing sites; halt, rest and concentration areas; reconnaissance and equipment of assault positions, and direct support of the unit's movement.**

The volume of engineer support missions depends on where the Mts Inf Bn moves: in the main column or independently, in the advance detachment, advance guard or rear guard.

If the battalion moves in the main column, the preparation of the route lies outside the range of the battalion commander's duties — it is the responsibility of the senior commander. In that case the battalion subunits carry out only the minor works necessary to ensure the uninterrupted advance of the battalion, such as strengthening or minor repair of broken road sections, reinforcement of bridges and sandy sections, reconnaissance of fords, piercing of gaps in obstructions and laying of short bypass roads.

If the battalion moves as a separate column in the advance guard, it may be assigned a route previously prepared for movement by engineer troops. But it may happen that this preparation will be carried out (partially or entirely) during the march and the battalion subunits will take part in it.

In that case the senior commander as a rule sends an engineer subunit to the route. Most prob-

ably it will be a road-building team provided with a roader, bridge layer, road mine detector, prefabricated road and bridge structures, means of increasing terrain trafficability, etc. It is advisable to include in it a motorised or tank subunit to ensure its independence. In addition to carrying out security and covering missions, this subunit may fulfil certain other tasks.

If the battalion marches in a separate column, it will have to fulfil engineer support tasks directly in the process of accomplishing the mission assigned, relying only on its own forces. Certainly, the time available to fulfil them will be much shorter.

During the march, especially when a meeting engagement is expected, the battalion commander should be continuously supplied with data on the character of obstacles and demolitions along the route of movement, on probable lines of meeting with the enemy and deploying for battle, and the most suitable routes for bypassing or overcoming a demolition zone. In that case **the engineer reconnaissance determines where and what measures are to be taken to remove obstacles, repair and rehabilitate road structures, to what sectors additional means and forces must be sent to ensure uninterrupted movement of battalion vehicles, etc.**

Experience shows that if the battalion performs a march independently, the combined-arms reconnaissance should include engineer scouts. If there are a lot of road and bridge structures on

the route it is better to detail two engineer reconnaissance parties (ERP). This will enable the subunit commander to carry out engineer reconnaissance by the leap-frog method.

The ERP may operate either independently or in cooperation with the combined-arms reconnaissance. As the latter fulfils its own tasks, the engineer reconnaissance reconnoitres the routes of movement and defines the most suitable methods of overcoming or bypassing any obstacles met. If the combined-arms reconnaissance incorporates engineer scouts, the latter are charged with the responsibility of carrying out engineer reconnaissance missions and there will be no need to detail an ERP. But in that case the sappers should be provided with a vehicle to ensure their independence.

The situation permitting, the ERP should be sent out one or two hours before the battalion main column starts to move. In that case the battalion commander will receive the requisite intelligence information in due time.

At an exercise it was necessary to reconnoitre a march route for a battalion and to gather, in a short space of time, information on the state of roads and terrain in the area of forthcoming operations. The senior commander ordered organisation of both air and ground reconnaissance. This combined method proved its value. The engineer reconnaissance was organised in the following manner. The higher headquarters detailed a helicopter for the purpose and soon a squad of engineer scouts was in the area of forthcoming actions. They carried out reconnaissance of the terrain, traffic routes and water sources, revealed the possibility of concealed disposition of troops and after that began to advance on motorcycles to meet the battalion column. As in some areas the battalion marched on three roads, the sappers divided into pairs which carried out reconnaissance of the routes and determined the carrying capacity of road structures. The engineer reconnaissance on an APC moved to meet them.

The engineer reconnaissance commander controlled the actions of his group from a helicopter, maintaining continuous communication with the ERP and the battalion commander. Simultaneously he reconnoitred the route along which the battalion was moving, and revealed the camouflage and protective features of the terrain. He also plotted on the map the places with obstructions, traced bypass routes and accordingly directed the patrols. In his turn he received all intelligence

data from the ERP, and, after processing, transmitted it to the battalion commander. Such organisation of the battalion engineer support on the march greatly contributed to the successful accomplishment of the mission.

In organising engineer reconnaissance on a march, the Mts Inf Bn CO must first of all rely on his own forces. The nature and volume of work to be done will depend on the state of roads and bridges, the weather, enemy fire activity and also the type of battalion combat equipment. Of course the rate of movement will greatly depend on the quality and speed with which the engineer reconnaissance manages to cope with its missions. Therefore the proper use of road repair and rehabilitation means and trafficability-increasing facilities acquires especial significance. It is advisable, in particular, that the head of the battalion column should include tanks and prime movers, which may be used for quickly laying a trail road, repairing broken road sections or eliminating suddenly arising damage.

The speed of column movement will considerably increase if one of the battalion companies is taught beforehand to restore destroyed road sections, repair bridges and lay bypass roads. Besides, it is advisable to provide all the subunits with the means of increasing terrain trafficability in addition to entrenching tools. In that case the engineer subunit attached to the motorised infantry battalion will be able to carry out in a shorter time such labour-consuming works as repair and restoration of bridges, construction of passages over ravines, piercing of gaps in obstructions, etc.

The place occupied by the engineer subunit in the battalion march formation depends on the march conditions and the time available for its preparation. Experience shows that the most favourable conditions for actions of engineers are created when they are sent out 2-3 hours before the beginning of the battalion march.

In each concrete case the distribution of engineer forces in the battalion column is determined by the situation, terrain conditions, and means and forces available. Usually the engineers are distributed in the column as follows: two or three engineer scouts are detailed to the combat reconnaissance patrol and one tank with a tank dozer attachment to the advance party; a combat engineer section and one tank with a tank dozer move in the battalion headquarters column, while company columns are provided with tank dozer

attachments and means of increasing terrain trafficability. The main part of the engineer subunit (a road-construction platoon or a combat engineer platoon) with a roader, a bridge layer and mechanical track bridges moves at the head of the battalion main column.

Engineer support on the march and in a meeting engagement should contribute to achieving security from observation and surprise, and must reliably protect subunits against powerful enemy weapons.

COPYRIGHT: "Soviet Military Review", No 8, 1982

CSO: 1812/159

PERCEPTIONS, VIEWS, COMMENTS

COMMENTARY ON U.S. 'STRATEGY'

Moscow SOVIET MILITARY REVIEW in English No 8, Aug 82 pp 44-47

[Article by Col Gen M. Petrov under the heading "International Affairs":
"Futile Strategy"]

[Text]

THE 26TH CPSU Congress pointed out that in recent years there has been a sharp growth of the aggressiveness of imperialism, especially American.

"Adventurism and a readiness to gamble with the vital interests of humanity for narrow and selfish ends — this is what has emerged in a particularly bare-faced form in the policy of the more aggressive imperialist circles," said L. I. Brezhnev at the Congress.

Behind the smokescreen of lies and inventions about a so-called "Soviet threat" the US strategists are developing various war theories and strategic concepts which are politically futile and militarily adventurist in substance. Among the latest developments is Pentagon's theory of a "limited" nuclear war. What is its essence? What are the aims and motives of its authors?

The official version boils down to the following: in the conditions of the present military equilibrium, the risk of destruction of Soviet cities is not a sufficient deterrent to "Soviet aggression." Therefore the United States should concentrate on developing the capabilities of its strategic forces to deliver a pre-emptive nuclear strike against a wide range of military targets in the USSR and the Warsaw Treaty countries.

By adopting this strategy Washington hopes, according to numerous US press reports, to build up an "impressive" deterrent and to restrain the Soviet Union, to show the US capability and readiness to resort to nuclear war at any moment. The White House is obviously convinced that the

new nuclear deterrent will increase pressure on the USSR and will strengthen Washington's hand in the US-Soviet relations especially in the SALT and other negotiations. At the same time it will demonstrate the American's strength and power to other countries.

Meanwhile US propaganda is trying to persuade the world public by saying that "a limited nuclear war," which is to involve only the military objectives and spare the cities, thus reducing the loss of human lives to a minimum, would be the most humane and acceptable policy in the present situation and would avert a total nuclear holocaust.

The US Administration gives its Atlantic partners to understand that they should share the burdens this strategy involves. It tries to impress on them that a situation may develop when the first nuclear strike will be delivered by the "Eurostrategic weapons" alone and the war can be limited to Europe. As Associated Press reported on October 21, 1981 Caspar Weinberger, US Defence Secretary, speaking to the NATO Nuclear Planning Committee openly admitted that a small nuclear war in Europe need not necessarily develop into a big war between the USA and the USSR. Western Europe should therefore not oppose an additional deployment of new US medium-range nuclear missiles and should increase their military spending every year. As to the consequences of a nuclear war for Western Europe, that is a matter of no concern for Washington.

One need not be a military specialist to see how strategically senseless, politically adventurist and extremely dangerous the US "limited" nuclear war strategy is for the peoples of the world.

The stake on a pre-emptive nuclear strike is obviously senseless in present conditions, for the US nuclear monopoly and even its superiority in strategic nuclear forces have been lost beyond recovery, while the military strategic parity has become a clear reality in today's world and the Soviet Union will never allow it to be upset. The situation has radically changed and to think in the categories of the 40s now means absolute incompetence and complete loss of realism and common sense.

It is common knowledge that given the present level of strategic nuclear weapons, guidance and warning systems it is impossible to deliver a pre-emptive nuclear strike without the risk of an equally powerful strike in response. Quite illusory is therefore any hope of an infallible recipe for winning a nuclear war by a knock-out disarming nuclear strike at the enemy without risking a pulverising retaliation.

Nor is it so simple to forecast the nature and methods of nuclear warfare. Advising President on a variant of employment of strategic nuclear weapons his experts actually imply some kind of ideal war in which the nuclear missiles must avoid towns and strike the targets which Pentagon prefers to declare military. Any sober-minded man understands that this is practically impossible. Military objectives are now generally located in such a way that even a pinpoint strike against them would inevitably involve mass annihilation of the civilian population.

The US Defence Department specialists submitted a report on the consequences of a "local" nuclear war to the Senate Foreign Relations Committee in 1975. The report estimates the US losses in case of selective Soviet nuclear strikes against US targets as follows: a strike at Whiteman Air Force Base would wipe out 10,300,000 people and strikes at ICBM bases, 21,700,000 people. It is easy to imagine the magnitude of human losses if strikes are delivered on other important US military objectives. British analysts estimated that four megaton bombs dropped on the United Kingdom would kill no less than 20 million people, while eight or nine such bombs are sufficient to wipe the whole of Britain off the face of the earth. These figures show what danger the nuclear maniacs expose the world to. Only down-right adventurists and liars can insist that limited use of nuclear weapons would spare the civilian population the horrors of Hiroshima and Nagasaki.

Washington's arguments concerning the "humaneness" of its strategy and the "acceptability" of a "limited" nuclear war are nothing but hypocrisy and the usual political trickery. "They want people to believe," L. I. Brezhnev said at the 26th CPSU Congress, "that nuclear war can be limited, they want to reconcile them with the idea that such war is permissible. But that is sheer deception of the peoples! A 'limited' nuclear war as conceived by the Americans in, say, Europe would from the outset mean the certain destruction of European civilisation. And of course the United States, too, would be unable to escape the flames of war." The real purpose of all this is to create in America a psychological climate of "acceptability" of nuclear conflicts to accustom the Americans to the idea of the possibility and even the inevitability of nuclear war, to break the will of the peoples to resist US imperialism and to reconcile them with an escalation of the arms race on a colossal scale. This, in our opinion, is a major risk of the new strategy for both the people of the United States and the whole of mankind.

Stripped of the verbal camouflage and the fiction about "detering Moscow" the US "limited" nuclear war strategy clearly means nothing but a return to the notorious strategy of "massive retaliation," that is to an open call for pre-emptive war. However, it would be wrong to take the US first strike concept as a mere return to the past.

The new strategy is the product of the growing aggressiveness of US imperialism, as well as the American development of new strategic weapons systems. As distinguished from the previous strategic theories the new concept will rest upon the more advanced material basis which is being feverishly built at the present time.

The "limited" nuclear war strategy is also dangerous because the reactionaries hope it will help to convince the world public of the inevitability of the arms race and further growth of spending for war. They hope thus to provide arguments to prove the necessity for allowing the military industrial complex to go on with the existing and newly developed military programmes.

The development of new and more advanced nuclear weapons will bring tremendous multibillion profits to the military-industrial complex. Envisaged are such large-scale programmes as accelerated production of "Trident" submarines, MX mobile ICBMs, and such costly programmes as missile carrying aircraft, all types of cruise missiles, production and deployment in Europe of new medium-range missiles, introduction of costly electronic control, communication and reconnaissance systems, building of a new command and control network and manufacturing of the lethal neutron

and chemical weapons. According to the White House estimates implementation of R. Reagan's strategic programme alone for the period of 1982 to 1987 is to cost the American people 222 billion dollars.

The present Administration in Washington is actually proceeding with a crash build-up of practically all types of weapons. The White House seeks to attain military superiority and then to impose its will on the Soviet Union from a position of strength. Special emphasis is laid on producing the offensive weapons to be used for the first strike. Defence Secretary C. Weinberger, speaking to a press-conference on February 3, 1981, described these militarist preparations as the "start of America's rearmament" — a mild term for a new tour of unprecedented military build-up. The Pentagon's annual report submitted by C. Weinberger to the US Congress in February presents a dramatic illustration of this.

Encouraged by orders from Washington the West European NATO countries are gradually moving in the same dangerous direction. Solidarity with the US nuclear strategy is clearly felt in the British government's decision to replace their "Polaris" missiles with the new American "Trident" missile system, in the modernisation and build-up of the French strategic nuclear forces, in this April agreement between the USA and the FRG, aimed at further militarisation of West Germany and increasing American military power in Europe and in the decisions of the NATO Council

session held in Bonn in June 1982 at which the USA continued to "twist the arms" of its "equal" partners.

Turning the Atlantic allies into its accomplices and henchmen, mostly by unceremonious political and economic pressure, Washington seeks to harness them as fast as possible to its strategic chariot. The United States encourages the build-up of the Eurostrategic nuclear and conventional war potential with a view to making Europe the major theatre of war and thus diverting a retaliatory strike from its own territory in case of a nuclear conflict. Some West European leaders will be well advised to remember this as they open their doors wide for more American medium-range missiles.

Deployment of additional 600 US nuclear missiles in Western Europe would result in a significant superiority of NATO over the Warsaw alliance in the medium-range nuclear carrier force. The USSR cannot afford such a hazard to its security and will never tolerate it. The hopes of the US and NATO strategists to get the upper hand here

are vain. Referring to these attempts L. I. Brezhnev states: "We cannot leave without consequences the deployment on European soil of the new American nuclear missiles aimed at the USSR and our allies. In this case we will have to think about extra defence measures. If necessary, we shall find impressive means to safeguard our vital interests."

Upsetting the present parity of forces of the aggressive NATO block and the defensive Warsaw alliance would not only significantly affect the character of military confrontation in Europe but would bring mankind right to the brink of a global nuclear abyss. The US Administration realises this too well. The American new medium-range missiles are strategic weapons in relation to the USSR. They are intended not to defend Europe as Washington and the US propaganda machine are trying to claim, but to deliver strikes at the Soviet ICBMs and vital objectives located in the European part of the Soviet Union. The Pentagon is thus scheming to reduce the Soviet capacity to retaliate in case of aggression. Its "Pershing-2" missiles are capable of hitting Soviet objectives within 5 to 6 minutes after the launch. This may introduce a radical change in the strategic situation, create additional military danger for the Soviet Union and upset the military balance between the USA and the USSR. Washington's primary objective is military superiority over the Soviet Union, not the security of Europe. Indeed deployment of the new missiles would seriously increase the war danger for Europe because the European peoples would be turned into hostages of American nuclear strategy.

The international public see the US "limited" nuclear war strategy as a serious threat to world security. Washington has good reason for trying to allay public alarm, but the only explanation for its adventurist policy it brings forward is the old and worn-out myth of a Russian military menace. Hiding behind peace-loving phraseology the imperialist reactionaries in their insane desperation are pushing the whole world for the sake of their own selfish interests towards nuclear Armageddon. This is the truth behind the adventurist US nuclear strategy.

L. I. Brezhnev stated clearly and firmly the attitude of the USSR towards nuclear war in his reply to the questions of the "Pravda" correspondent on October 21 and to the editors of the West German "Der Spiegel" magazine on November 3, 1981. His statements exposed the treacherous rhetorics of Western strategists and politicians about the acceptability of a "limited" nuclear war

and the possibility to win it and contained a new call to the United States to support the Soviet proposal not to use nuclear weapons first. Indeed, if there is no first nuclear strike, there will be neither second nor subsequent strikes, and the problem of nuclear war will thus be removed. And this, said Leonid Brezhnev, is exactly what all the peace-loving people of the world want and what the Soviet Union and its leadership apply all their efforts to. The striving of the USSR to prevent a nuclear holocaust was clearly asserted at the 36th session of the UN General Assembly where it stepped forward with a new major initiative to ensure that nobody should ever be the first to use the nuclear weapon and that nuclear war should be outlawed. The move was supported by the majority of the United Nations members.

Peace and security were also the aims of the initiatives put forward by L. I. Brezhnev and reaffirmed by him in February in his talk with the representatives of the Socialist International in Moscow. In contrast to R. Reagan's notorious "Zero option" which seeks twofold superiority in carriers and threefold superiority in nuclear warheads for NATO, the Soviet leader declared the Soviet Union's readiness to agree to a mutual East-West total repudiation of both medium-range and tactical nuclear weapons. That, L. I. Brezhnev said, would really be a "zero option," and the USSR is ready to take it. If, however, the West is

not yet prepared for such a radical solution, the Soviet Union proposes to agree on a major stage-by-stage reduction in medium-range weapons with the balance maintained between NATO and the Soviet Union at every stage. Moreover, in an effort to facilitate a just mutual agreement on a big reduction of nuclear weapons in Europe and as an example of good will the Soviet leadership decided on a unilateral moratorium on further deployment of medium-range nuclear missiles in the European part of the Soviet Union, and already carries out the reduction of a considerable number of such missiles. L. Brezhnev's proposals contained in his Appeal to the participants of the second special UN General Assembly session on disarmament are a striking evidence of the USSR's peaceful intentions and good will. The Soviet obligation not to be the first to use nuclear weapons is an irrefutable evidence of the defensive nature of the Soviet military doctrine.

The USSR regards nuclear attack as the foulest crime against humanity. To ascribe to the USSR treacherous plans to deliver a "first strike" at the USA is to deceive the world public. The Soviet proposals, just as the US and NATO attitude towards peaceful initiatives which answer the interests of peace-loving nations, prove who is preparing for nuclear war. Those who reject these honest, frank and peaceful proposals stand exposed as enemies of a constructive solution of the problem of peace.

INITIATIVE IN DEVELOPING NEW WEAPON SYSTEMS

	Nuclear weapons	Intercontinental strategic bombers	Nuclear-powered submarines	Nuclear-powered aircraft carriers	Multiple independently targetable re-entry vehicles	Neutron weapons
USA	Mid-1940s (used in August 1945)	Mid-1950s	Mid-1950s	Early 1960s	Late 1960s	Late 1970s-early 1980s
USSR	Late 1940s	Late 1950s	Late 1950s	None	Mid-1970s	None

COPYRIGHT: "Soviet Military Review", No 8, 1982

CSO: 1812/159

END